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United States Coast Guard

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REQUEST FOR INFORMATION (RFI)
U.S. COAST GUARD IN-SERVICE VESSEL SUSTAINMENT (ISVS) -
270' WMEC (MEDIUM ENDURANCE CUTTER) SERVICE LIFE EXTENSION PROGRAM (SLEP)

THIS REQUEST FOR INFORMATION (RFI) IS BEING RELEASED PURSUANT TO FEDERAL ACQUISITION REGULATION (FAR) PART 10, "MARKET RESEARCH."

This RFI is issued for informational, market research, and planning purposes only. It does not constitute a Request for Proposal (RFP) or a promise to issue a RFP in the future. This RFI does not commit the United States Coast Guard (USCG) to contract for any supply or service whatsoever. Further, the USCG is not at this time seeking proposals and is not interested in receiving unsolicited proposals.

Respondents are advised that the USCG will not pay for any information, administrative or travel cost incurred in response to this RFI or site visit. All costs associated with responding to this RFI will be solely at the responding party's expense. At this time, proprietary information is not being requested, and respondents shall refrain from providing proprietary information in response to this RFI.

This RFI is issued by the USCG In-Service Vessel Sustainment (ISVS) Project Office as a means of market research for the 270' WMEC Service Life Extension Project (SLEP) effort. This effort will extend the service life of several 270' WMECs by 10 years and recapitalize a number of major systems.

The USCG welcomes all interested parties to conduct an on-site visit aboard a designated 270' WMEC cutter located at 4000 Coast Guard Blvd, Portsmouth, Virginia to better understand the complexity of the task, hull and machinery interferences and space constraints.
Request for Information (RFI) Only. Not responding to this RFI does not preclude participation in any future RFP, if any is issued. If a solicitation is released, it will be synopsized on the Federal Business Opportunities (FedBizOpps) website: https://www.fbo.gov and the GSA E-Commerce Central website: http://www.gsa.gov. It is the responsibility of the potential Offerors to monitor these sites for additional information pertaining to this requirement.

Respondents are also advised that all submissions become USCG property and will not be returned. In accordance with FAR 15.201(e), responses to this notice are not offers and cannot be accepted by the USCG to form a binding contract.

SCOPE:

The work anticipated to be performed for the 270' SLEP effort includes an **Electrical Power System Renewal Inspection and the Main Diesel Engine (MDE) Inspection.** The work package(s) may consist of planned reoccurring maintenance items and several system upgrades. The work package(s) may contain significant Machinery Control and Monitoring System integration requirements. The USCG anticipates that the work items will be structured as Firm Fixed Price.

Interested parties may choose to respond individually to the Electrical Power System Renewal Inspection, or the MDE Inspection, or to both efforts in this RFI. Each response will be considered based on the criteria provided, regardless of which effort(s) the interested parties provide. No preference should be inferred for responding to either or both efforts presented in this RFI. See Attachment 1 for MDE Inspection and Attachment 2 for Electrical Power System Renewal Inspection.

A potential Offeror must have the ability to deliver the required equipment and/or services on time, to meet scheduled production or dockside availability periods.

Dimensions for 270 are as follows:

270' WMEC			
Physical Characteristics		Length Overall	270 feet
		Beam	38 feet
		Full Load Draft	14 feet
		Full Load Displacement	1,820 tons
		Ship's Horsepower	7,290 SHP
		Delivery	**Mid-Life**
Operational Characteristics and Capabilities	**Crew**	99 crew, plus 5-person Aviation Detachment. Max accommodation: 109	99 crew, plus 5-person Aviation Detachment. Max accommodation: 109
	Speed	Max: 19.5 knots, Cruising: 12 knots	Max: 18 knots, Cruising: 12 knots
	Cruising Range	9900 Nautical Miles (NM)	9900 NM
	Endurance	21 days	21 days
	Maximum Sea State	N/A	Sea State 7
		Current Specifications	

Key Systems Specifications	**Ship's Service Diesel Generators**	2 @ 475KW @ 450VAC, 3ph, 60Hz
	Emergency Diesel Generator	475KW, @ 450VAC, 3ph, 60 Hz
	Main Diesel Engines	2 @ 12,024 cu in, 3,650 BHP @ 1025 RPM
	Controllable Pitch Propellers	2 Escher Wyss 850, 4 bladed @ 9ft diameter

The Electrical Power System Renewal will consist of the vendor delivering a "kit" that will be installed by the USCG at the CGYARD, Baltimore, MD. Vendor technical representation may be required during installation and post installation testing.

The MDE Inspections will be conducted at various pre-determined locations during scheduled dockside maintenance availability periods for each 270' WMEC that receives a SLEP. This will include Homeports located in the contiguous United States, and may require vendor access to USCG and U.S. Military Bases.

SUBMISSION INSTRUCTIONS:

Respondents interested in providing a response to this RFI should submit information that corresponds to the categories below. Responses should include:

A. <u>Business Size</u>: State the business size in accordance with North American Industry Classification Code (NAICS) Code 336611, "Ship Building and Repairing."

Respondents should state whether their business is a Large or Small Business, and identify if the business is a:

1. Small Disadvantaged Business (SDB),
2. Historically Underutilized Business (HUB) Zone Business,
3. Women Owned Small Business (WOSB),
4. 8(a) Certified Small Business,
5. Veteran Owned Small Business (VOSB), and/or a
6. Service Disabled Veteran Owned Small Business (SDVOSB).

This response should also include:

1. Dun and Bradstreet Number (DUNS),
2. Commercial and Governmental Entity (CAGE) code

B. **<u>Corporate Capability</u>**: The USCG is seeking information from companies that are interested in the 270 SLEP effort which includes MDE Inspection and/or Electrical Power System Renewal. Companies that believe they have the capability to perform the work required by the 270' SLEP effort are requested to submit:

1. A capability statement detailing the company's ability to deliver first article(s) by October 1, 2021, and follow-on deliveries at up to two sets per year for up to six years.
2. A description of any previous experience similar to the complexity of this requirement.
3. A statement of ability to provide warehousing and secure storage of Government Furnished Equipment (GFE) and Contractor Furnished Equipment (CFE) as it relates to ship repair and maintenance.
4. A description of your experiences providing detail design work related to specifications that are not fully complete.
5. A description of your experience demonstrating your ability to partner with other Government entities and their contractors, while maintaining technical, schedule, and cost constraints of the contract.
6. A description of your experience working on ship electrical and/or propulsion distribution systems and machinery control systems.
7. A statement describing the biggest challenges your company would face in trying to perform this requirement.

Interested parties may choose to respond individually to the Electrical Power System Renewal Inspection, or the MDE Inspection, or to both efforts in this RFI. Each response will be considered regardless of which effort(s) the interested parties provide the requested information. No preference should be inferred for responding to either or both efforts presented in this RFI.

Links to REGISTER are provide in the Welcome Letter (Attachment 3). Please be advised that only one interested party per appointment can be accommodated, with room for up to three individuals per appointment onboard the CGC NORTHLAND at a time due to space constraints.

Please submit your responses to: Ms. Ada Williams, Contracting Officer at Ada.Williams@uscg.mil, and Ms. Jacqueline Brown, Contract Specialist at Jacqueline.Brown@uscg.mil no later than **12:00 PM Eastern Standard Time (EST) 26 September 2018**. If desired, include in a separate section any questions, comments and suggestions in relation to the work required by the 270' SLEP with your response. Please title the subject of your email: "RFI-USCG-270SLEP-2018-1 – [YOUR COMPANY NAME]". Responses received after this date may not be afforded a comprehensive review.

ATTACHMENT 1

270’ MDE Inspection REQUEST FOR INFORMATION

The U.S. Coast Guard is looking to identify responsible sources that possess the necessary skills and equipment to complete a detailed internal inspection of American Locomotive Company (ALCO) 18251F main engines on U.S Coast Guard 270’ WMEC cutters.

Background Information:

ALCO 251F Bore: 9 inches; Stroke: 10.5 inches

ALCO 251F 18V fully assembled weight is: 62,500 lbs dry; 68600 lbs wet

ALCO 251F 18V block weight is: 20,000 lbs

Crankshaft length: 207.5 in.

Crankshaft weight: 4,230 lbs

The current overhead lifting capability in the engine room with existing structure is: UNKNOWN

Reference Drawings:

Attachment identifies applicable reference drawings of the engine, machinery space and arrangement onboard the cutter that are available upon request.

The objective of this request is to determine the most effective method for inspecting the ship’s engine blocks for cracks, leaks and damage without removing the engine blocks from the ship; the inspection should be able to accomplish the following:

1) Allow removal of the crankshaft from the engine onboard the cutter
2) Onboard staging and properly supported storage of the crankshaft while inspecting and repairing engine block
3) Access to crankcase inspection onboard the cutter
4) Access to complete bore alignment(crankline) onboard the cutter
5) Detailed inspection of the engine block cylinder liner bores
6) Discuss ability to complete onboard repairs including: Machining of cylinder bores, machine crank bore, engine block welding repairs, and/or bearing serration machining.
7) Previous experience with inspection and repairs of shipboard main diesel engines
8) Any previous experience with ALCO engines

The cutter is space constrained and has limited accesses for onloading and offloading equipment. Additionally, there is limited space for maneuvering and placing equipment onboard the cutter. Based on the inspection/machining specified above the government desires to know:

1) What type of equipment/rigging would be required for the inspection
2) Approximate dimensions and weights of equipment/rigging required onboard the cutter.
3) Ability to breakdown equipment/rigging and minimum dimensions of equipment required to be brought onboard cutter
4) Tools/equipment required to complete bore alignment/machining
5) Approximate size of tools/equipment required for bore alignment/machining

Sources desiring to participate in an onsite visit should register using a link in the Welcome Letter (Attachment 3) no later than September 26, 2018.

This is a Request for Information ONLY and no proposals are being requested or accepted at this time.

APPENDIX A REFERENCE DRAWINGS:

901-WMEC 182-001 Rev G MN ENG & RDCN GEAR FDN

905-WMEC 182-001 Rev F MN ENG & RDCN GEAR FDN

901-WMEC 201-001 Rev T ENGINE ROOM ARR

905-WMEC 201-001 Rev H ENGINE ROOM ARR

901-WMEC 233-001 Rev E PRPLN DIESEL INSTL DWG

905-WMEC 233-001 Rev B PRPLN DIESEL INSTL DWG

901-WMEC 259-002 Rev K DIESEL EXHAUST SYSTEM A & D

905-WMEC 259-002 Rev C DIESEL EXHAUST SYSTEM A & D

901-WMEC 321-002 Rev J WIREWAYS MCHRY SPACE & ECC

905-WMEC 321-002 Rev E WIREWAYS MCHRY SPACE & ECC

901-WMEC 513-005 Rev F VENT, ER & ECC - PLAN, SECT & ELEV A & D

905-WMEC 513-005 Rev A VENT, ER & ECC - PLAN, SECT & ELEV A & D

901-WMEC 611-002 Rev G MCHRY SPACES PADEYES - A & D

905-WMEC 611-002 Rev G MCHRY SPACES PADEYES - A & D

901-WMEC 611-003 Rev J PADEYES OUTSIDE MCHRY SPACES - A & D

905-WMEC 611-003 Rev D PADEYES OUTSIDE MCHRY SPACES - A & D

901-WMEC 801-005 Rev K GENL ARR, MN DK

905-WMEC 801-005 Rev F GENL ARR, MN DK

901-WMEC 801-009 Rev L OUTBOARD PROFILE

905-WMEC 801-009 Rev J OUTBOARD PROFILE

901-WMEC 801-010 Rev C INBOARD PROFILE

905-WMEC 801-010 Rev C INBOARD PROFILE

ATTACHMENT 2

Electrical Power System Renewal Inspection

The U.S. Coast Guard (USCG) in support of the 270' WMEC Service Life Extension Program (SLEP) is looking to identify responsible sources that possess the skills and equipment to complete the renewal of the electrical power system for the 270' Medium Endurance cutters.

This effort involves selecting and procuring replacement Ship's Service Diesel Generators (SSDGs) and Emergency Diesel Generators (EDGs) with commercially available diesel generator sets and integrating them into the existing shipboard electrical system. This effort includes switchboard (SWBD) refurbishment/modernization design and identification of components required for integration with the new SSDGs and EDGs into the shipboard electrical distribution system.

The shipboard installation of the generators and switchboard modifications/installations will be performed by the US Coast Guard Yard in Baltimore, MD.

The objective of this request is to identify sources that can procure generator sets per USCG specifications and provide design to modify/upgrade the switchboard to fully integrate the generators into the existing shipboard electrical distribution system.

Background - Existing SSDG and EDG are obsolete and no longer sustainable and need to be replaced. The renewal is limited to extending the service life on the cutter and not meant add additional capabilities. The existing switchboards were also designed and installed when the cutter was built. In an effort to control cost, USCG is looking to minimize refurbishment/upgrades only as required to adequately integrate new generator sets in the shipboard electrical distribution system and to extend service life of the components. For information and details on the existing SSDG, EDG, and switchboard please see References (2, 3, and 4).

Requirements:

1. The SSDGs and EDG ratings shall be a minimum of 475 kW not to exceed 521kW; continuous power at 450 Volts, ungrounded 3-phase, 60-Hz (2 SSDGs, 1 EDG).
2. Gensets shall be designed and approved for marine use.
3. SSDG's engine and generator shall be water-cooled; it shall also have an air operated starting system.
4. EDG's engine shall be water-cooled and its generator shall be air cooled by ambient air; it shall also have an electric starting system.
5. Each generator shall be capable of operating continuously in parallel with any other generator at any load up to their combined maximum continuous power rating.
6. Each generator shall be capable of satisfactorily operating in parallel with two other generators or with shore power for the period required for transfer of load.

Switchboard Upgrade/Modification requirements:

The USCG is looking to maintain current capability and functionality. The primary reason for any modifications/upgrades to the switchboard are limited to integrating new generator sets into the shipboard electrical distributions system and to extend service life. The following is a description of the current and intended function of the switchboards:

1. The Ship's Service SWBD shall have two generator sections, one for each SSDG connected by a bus tie breaker. The Emergency SWBD shall have a single generator section for the EDG.
2. The capability to manually or automatically synchronize generators and then manually parallel any two generators at a time. Generator, bus tie, and shore tie breakers shall be interlocked to prevent being closed on an energized bus without being synchronized first.
3. Provide capability at switchboard to allow selection of any of the generators as the standby generator. In addition, failure of the operating generator shall initiate automatic starting of standby genset, if standby fails then automatic starting of emergency genset.
4. Standard metering shall be provided and/or updated at the switchboard to include (volts, amps, watts, and frequency etc.)
5. The SWBD modifications shall fit within the same envelope of the existing switchboards (Figure 1).

There will be consideration for other types of switchboard configurations/modifications as long as they meet the functional requirements as described above, (for example, an auto paralleling type system or a generator with voltage regulation and governor built in, and does not have to be inside the switchboard etc.).

Requested Information:

Interested parties are requested to respond to this RFI with the following information (including drawings where applicable):

1. **SSDG and EDG General Information:**

   Make/Model
   Power Rating (continuous duty and overload)
   Overall dimensions
   Dimensions of major components
   Mounting dimensions (footprint) and arrangement
   Maintenance envelope
   Locations of external connections (air, water, exhaust, electrical, control, etc.)
   Overall weight (as installed, with and without fluids)
   List of standard equipment
   Available options
   Environmental requirements (temperature, humidity, vibration, etc.)
   Timelines for procurement of equipment/components and labor
   Type of engine
   Speed and power

Number of cylinders, displacement, bore, stroke, and compression ratio
Type and specs of governor
Type of fuel required
Fuel consumption vs. output
Description of cooling system
Description of starting system
Description of lube oil system
Emissions (EPA Tier) certification
Coupling, mounting, and alignment to generator
Output power (kW), apparent power (kVA), voltage, current, phases, frequency
Stator and rotor construction
Insulation class
Description of exciter
Type and specs of voltage regulator
Frequency and voltage regulation/stability
Description of cooling system

2. Switchboard Configuration

Provide a general description of recommended switchboard modifications/upgrades required integrate new generators in shipboard electrical distribution system including size and space requirements, identify new components required.
Provide information on any capabilities/experience related to switchboard design, modification, construction and/or refurbishment.

3. MPCMS/CGMCS Integration

Ability to interface with existing onboard machinery control system and capabilities. Reference (1) describes the current capabilities and is available upon request.

4. Other Information

Price and availability
Warranty
Maintenance requirements and frequency
Distributor/dealer support network
Lead time for parts and services
Recommended spare parts
Applicable industry standards and certifications

References: The following references are available upon request:

(1) USCG Drawing 905-WMEC-320-014, Electrical One Line Diagram
(2) USCG Drawing 905-WMEC-324-002, Plan & Elevation 450V/60Hz Ship Service Switchboard
(3) USCG Drawing 905-WMEC-324-003, Switchboard Development

EXISTING SWITCHBOARD MEASUREMENTS

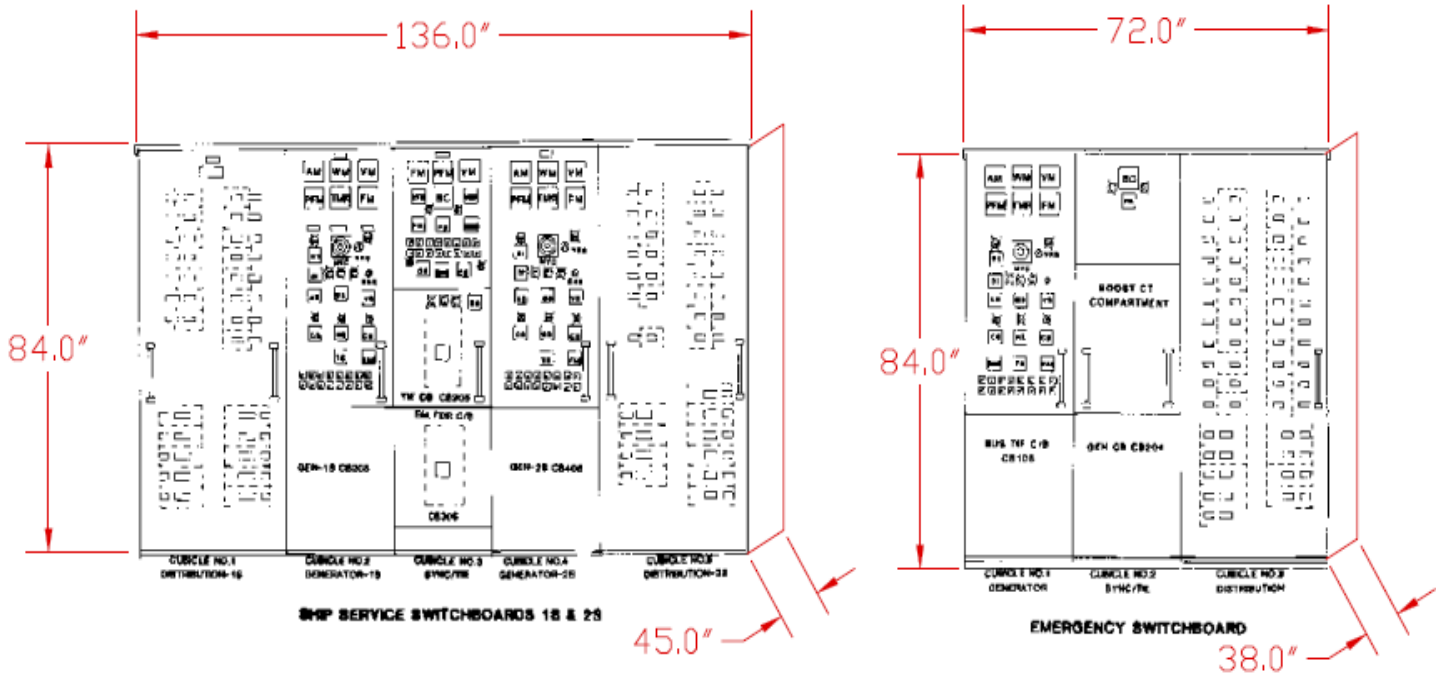

Figure 1 Existing Switchboard Dimensions

ATTACHMENT 3

U. S. Coast Guard 270' WMEC Service Life Extension Program (SLEP) Site Visit Welcome Letter

Dear Prospective 270' WMEC SLEP Site Visit Participant;

Thank you for registering and your interest in the U. S. Coast Guard 270' WMEC SLEP Site Visit. We greatly appreciate your participation in this event and hope to provide you with further insight into the Coast Guard's effort to replace key electrical generation system components, and conduct main diesel engine inspections/enhanced overhauls. For more technical details please review the Request For Information (RFI). We intend this to be the beginning of a fruitful government-industry partnership and we are eager to hear about your capabilities to support this important national effort.

Date/times: By Appointment only; 3 days, Wednesday October 10th through Friday, October 12th; two, 3-hours appointments each day: 0900-1200 and 1300-1600; only one vendor per appointment due to space constraints. Please use the links below to register (each link will allow only one participant to register, please try select another timeslot link if your 1st choice indicates already full):

Wednesday, 10 Oct, 9:00 am - 12:00 pm
Wednesday, 10 October, 1:00 pm - 4:00 pm
Thursday, 11 Oct, 9:00 am - 12:00 pm
Thursday, Oct 11, 1:00 pm - 4:00 pm
Friday, 12 Oct, 9:00 am - 12:00 pm
Friday, 12 Oct, 1:00 pm - 4:00 pm

The U. S. Coast Guard 270' WMEC SLEP Site Visit will be held at the following location:

Coast Guard Cutter NORTHLAND,
U.S. Coast Guard Base Portsmouth
4000 Coast Guard Blvd
Portsmouth, VA 23703

Security Requirements (US Citizens only please): Valid government issued photo ID (state issued driver's license, US Government issued CAC card, etc.)

Registration: **DEADLINE IS WEDNESDAY, SEPTEMBER 26, 2018**

Additional details are included in the RFI. **Due to the limited space aboard the Cutter, only 3 participants per appointment can be accommodated**. Each participant will be required to show a valid government issued photo ID to gain access to the event.

Questions & Comments:
We value your questions and comments. All questions and comments must be submitted in writing and answers will be provided for all participants at a later date per the RFI instructions.

For questions leading up to the event, please contact:

Ms. Ada Williams, Contracting Officer: Ada.Williams@uscg.mil/202-475-3710 or,

Ms. Jacqueline Brown, Contract Specialist: Jacqueline.Brown@uscg.mil/202-475-3266