BID REQUEST
Pre-Purchase of Standby Generator
Bid Number # CL16-SM-0087

Introduction
The University of Massachusetts Lowell (UML) invites bids on the purchase of a Standby Generator for the Campus Recreation Center.

Bid Specifications
1. Please see Standby Generator Technical Specifications Section 262300, included as Attachment B here.

Bid Rejection
The University reserves the right to reject any or all bids received in whole or in part if it is deemed such action is in the best interest of The University and the Commonwealth of Massachusetts.

Preparation of Bids
Bids must be signed, where instructed. Bidders are cautioned that errors, alterations, or corrections on the submitted bid must be initialed by the person signing the bid proposal or his/her authorized designee. Failure to do so may result in rejection of the bid for those items erased, altered, or corrected and not initialed. Telephone and or Fax bids will not be accepted.

Selection Criteria
UML shall enter into an agreement with the Bidder who submits the proposal that meets the minimum requirements, proof of quality and performance of previous work, ability to meet the time frame set by the University, is financially beneficial to UML and demonstrated ability to service the product in a timely and satisfactory manner.

Certification of Tax Status
Pursuant to Massachusetts General Law, Chapter 62C, Section 49 A, the bidder certifies under penalties of perjury that to the best of the bidder's knowledge and belief, they have filed all state tax returns and paid all state taxes required by law.
Certification of Non-Collusion

Pursuant to Massachusetts General Law, Chapter 7, Section 22 (20), the bidder certifies under penalties of perjury that their bid is in all respects bona fide, fair, and made without collusion or fraud with any person, joint venture, partnership, corporation or other business or legal entity.

Bidder's Representations

Each bidder by submitting its bid represents that:

a) The bid document and specifications have been read and understood by the bidder,
b) The bid is based upon the items described in the bidding documents and specifications without exceptions,
c) The bid has been arrived at independently and is submitted without collusion,

Bid Documents

Proposal will be received electronically and must be submitted via email to Purchasing@uml.edu.

Bid Due Date

Bids must be received by Monday, July 11, 2016 at 11:00 AM EST for consideration.

Late bids will not be considered, and will be placed, unopened, in the bid file.

We strongly encourage you to contact the Purchasing Office by telephone or e-mail prior to the bid opening to confirm that your bid has been received by the Purchasing Department. The general Purchasing Office phone number is (978) 934-3500 or email address is Purchasing@uml.edu. All communication should reference RFB No. CL16-SM-0087.

Questions/Contact Person

Prospective Bidders may submit questions to UML regarding this solicitation via email to Purchasing@uml.edu.

Amendments

The Purchasing Department reserves the right to amend, alter, or cancel the bid at any time prior to the deadline for submissions of bids. If such action is necessary, all potential bidders who have received or requested a copy of the bid will be notified of the changes to be made in writing and whether the bid opening date will be extended.

Debriefing

Any Vendor may request a debriefing within one (1) week after receiving notification of award, to discuss the Selection Committee's evaluation of its bid proposal. Request for debriefing shall be made in writing to the Purchasing Manager. Debriefing shall not include discussions of any competing bids.

Massachusetts Public Record Law

All bids and related documents submitted in response to this RFP are subject to the Massachusetts Public Records Law, Massachusetts General Law Chapter 66, Section 10 and to M.G.L. Chapter 4, Section 7, Subsection 26, regarding public access to such documents. Statements in the bid response that are inconsistent with those statutes will be disregarded. Any additional questions regarding the Public Records Law should be directed to the Public Records Division at: (617) 727-2832 during regular business hours.
business hours. You may also access various Public Records Division publications through the Internet at: www.sec.state.ma.us/pre.

**Transfers and Subcontracting**

The Vendor may not subcontract, in whole or in part, any portion of this contract without the written consent of the University.

**Nondiscrimination in Employment and Affirmative Action**

The Contractor shall not discriminate against any qualified employee or applicant for employment because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation. The Contractor agrees to comply with all applicable Federal and State statutes, rules and regulations prohibiting discrimination in employment including but not limited to: Title VII of the Civil Rights Act of 1964; the Age Discrimination in Employment Act of 1967; Section 504 of the Rehabilitation Act of 1973; the Americans with Disabilities Act of 1990; and M.G.L. c.151B.

**Vendor Not Employee of UML**

The Vendor, or his employees or agents performing under the agreement, are not to be deemed to be employees of UML nor to be agents of UML in any manner whatsoever. The Vendor will not hold himself out as, nor claim to be, an officer or employee of UML and will not make any claim, demand, or application to or for right or privilege applicable to an officer or employee of UML, including, but not limited to, workmen's compensation coverage, unemployment insurance benefits, social security benefits, or retirement membership or credit.
Company Information and Signature Required

Company Name: ____________________________________________________________

Company Address: _________________________________________________________
__________________________________________________________
__________________________________________________________

Tel. # _______________________________    Email: _____________________________

Are you
() Woman Owned Business
() Minority Owned Business
() Individual/Sole Proprietorship
() Partnership
() Government
() Non-profit Organization
() Corporation
() Disadvantaged Business
() Other (specify) __________________________________________________________

Tax I.D./ FEIN # _____-____-_____ or S.S.N.# (if individual) _____-____-_____.
Signature of owner or authorized officer*: _________________________________
Please print name: _________________________________
Title: ________________________________
Date submitted: ___/___/___
Certification of Non Collusion

The undersigned certifies under penalties of perjury that this Bid or Proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

____________________________________

Authorized Signature*

____________________________________

Printed Name of person signing bid or proposal*)

____________________________________

(Name of business)
Business Reference Form

Company Name:___________________________________________________

1. Reference Name:______________________  Contact Person:_______________
   Email Address:_____________________________ Tel Number:________________
   Description and Dates of Services Provided: ________________________
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________

2. Reference Name: _____________________  Contact Person:_______________
   Email Address: _____________________________ Tel Number:________________
   Description and Dates Services Provided: ________________________
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________

3. Reference Name:______________________  Contact Person:_______________
   Email Address:_____________________________ Tel Number:________________
   Description and Dates of Services Provided: ________________________
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________

Must list all jobs performed in a similar scope in the past 3 years. References will be contacted to confirm Bidder’s abilities, qualifications and performance. The University may deem the Bidder’s response unresponsive if a reference is not obtainable from listed reference after reasonable attempts.
ATTACHMENT A

BID FORM – BID # CL16-SM-0087

UNIVERSITY OF MASSACHUSETTS LOWELL

Pricing:

Option 1:
400 kW Standby Generator System with accessories $___________

TOTAL PRICE $___________

*Total Price must include the delivery and warranty as stated in the bid*

Option 2:
300 kW Standby Generator System with accessories $___________

TOTAL PRICE $___________

*Total Price must include the delivery and warranty as stated in the bid*

The Bid includes all Addenda numbered ______________________________

In addition to the bid amounts stated above, we agree to abide by all the terms and conditions set out in the Bid.
VENDOR BIDDER CHECK LIST

AS A QUALIFIED BIDDER, HAVE YOU INCLUDED:

_____ Company information and signature
_____ Certificate of non-collusion and tax compliance
_____ Business Reference
_____ Completed Form for General Bid Attachment A

_____ Bids must be received by email at purchasing@uml.edu no later than 11:00 AM EST., Monday July 11, 2016. Bids received after this date and time will not be accepted.
SECTION 262300 STANDBY GENERATOR SYSTEM

PART 1 – GENERAL

1.01 WORK INCLUDED

A. Provide standby generator system with integral load bank and accessories for a complete and operable system. Provide two options based on the following specifications, (1) generator rated at 400 kW; (2) generator rated at 300 kW.

1.02 RELATED DOCUMENTS

A. Reference listings are provided as a convenience to the Contractor or Subcontractor providing the Work of this Section and may not contain all the requirements affecting this Section. It remains the responsibility of the Contractor or Subcontractor to locate and comply with all requirements of the Contract Documents.

1.03 SUBMITTALS

A. Submit data, plans, and wiring diagrams, including power and voltage ratings, maximum symmetric short circuit current, annunciation methods, and all control functions. Submittal shall include overall dimension, weight, fuel consumption, and fuel tanks, rated KW, KVA, voltage, starting KVA, circuit breaker rating and alarm. Also automatic transfer switch short circuit voltage and current ratings, dimensions, weight and all control functions.

B. Generator shall be rated for 400 kW or 300 kW respectively, capable of starting 880 kVA of motor load with maximum 30% voltage dip and 0.25% frequency dip maximum. Manufacturer's written verification of generator suitability shall be sent to the Engineer.

C. Submit certification that the following factory testing has been successfully completed by the manufacturer:

1. Prototype factory tests: The system manufacturer shall certify that the engine, generator, controls, and switchgear of an in-house engineered model with similar characteristics has been completed including the following:

a. Fuel consumption at 1/4, 1/2, 3/4, and full load.

b. Exhaust emissions.

c. Mechanical and exhaust noise.

d. Governor speed regulation 1/4, 1/2, 3/4, and full load; and during transients.

e. Motor starting kVA.

f. Generator temperature rise in accordance with NEMA MG1-22.40.
g. Voltage regulation at 1/4, 1/2, 3/4, and full load; and during transients.

h. Harmonic analysis, voltage wave form deviation and telephone influence factor.

i. Generator short circuit capability.

j. Cooling system performance.

k. Torsional analysis.

l. Linear vibration analysis.

2. Production factory tests: The system manufacturer shall perform production tests on the complete generator set supplied by the manufacturer's facility. A certified report of these tests shall be available when requested at the time of the generator set order. These tests and controls shall include but not be limited to:

a. Operation at rated kW.

b. Operation at rated kW (optional).

c. Transient and steady state governing.

d. Transient and steady state voltage regulation.

e. Operation of all alarm and shutdown devices.

f. Single step load pickup of rated kW.

g. Operation at 2250 rpm (125% overspeed) at room temperature.

D. Submit operation and maintenance manuals for complete system in accordance with Section 260100, to include but not limited to the following:

1. Operating instructions - with description and illustration of all switchgear controls and indicators; and engine and generator controls and indicators.

2. Parts CD - that illustrates and lists all assemblies, subassemblies, and components, except standard fastening hardware (nuts, bolts, washers, etc.).

3. Preventative maintenance instructions - on the complete system that cover daily, weekly, monthly, biannual, and annual maintenance requirements and include a complete lubrication chart.

4. Routine test procedures - for all electronic and electrical circuits and for the main AC generator.

5. Troubleshooting chart - covering the complete generator set showing description of trouble, probable cause, and suggested remedy.
6. Recommended spare parts list - showing all consumables anticipated to the required during routine maintenance and test.

7. Wiring diagrams and schematics - showing function of all electrical components.

8. Load test bank control panel.

1.04 REGULATORY REFERENCES

A. All specified items or systems shall be designed, manufactured, tested, and installed in compliance with applicable provisions of all governing codes, rules, laws, and ordinances.

1. If there is a conflict between applicable documents, then the more stringent requirement shall apply. All documents listed are believed to be the most current releases of the documents. The Contractor has the responsibility to determine and adhere to all applicable documents and to the most recent release when developing the proposal for installation.

2. This document does not replace any code, either partially or wholly. The Contractor must be aware of local codes that may impact this project.

1.05 WARRANTY

A. Provide full two-year warranty for standby generator system at the completion of the project. The warranty shall cover all parts, labor and travel expenses necessary for a dependable system for the indicated period. Warranty shall not cover routine maintenance items such as oil, filters and belts.

B. The generator set supplier shall have factory-trained service representatives and tooling necessary to install, test, maintain, and repair all provided equipment and shall maintain a dispatch center 24 hours per day, 365 days per year to minimize service response time.

C. The generator set supplier shall have sufficient parts inventory to maintain over the counter availability of at least 90% of any required parts and shall guarantee 100% parts availability within 48 hours from the time an order is entered with the dealer.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Subject to compliance with requirements, provide products by the following [or equal]:

1. Standby Generator:
   a. Generac
   b. Kohler
   c. Caterpillar
   d. Onan
B. Substitutions: Items of equal quality, function, and performance may be proposed for substitution.

2.02 STANDBY GENERATOR SYSTEM WITH INTEGRAL LOAD BANK

A. Emergency standby generator system shall be suitable for intended use. Ratings of system shall be adequate for proposed full loading.

B. Upon failure of normal power source switch of emergency load to generator shall be within 10 seconds maximum.

2.03 ENGINE-GENERATOR UNIT

A. Provide an alternating current standby #2 diesel fuel engine-driven generator unit as indicated rated for 400KW, 500 KVA at 0.8 power factor for standby operation, 480/277 volt, three-phase, four-wire, 60 Hz, 1800 rpm, water-cooled, with unit-mounted radiator, heavy-duty engine connected directly to a 4-pole revolving field type single-bearing generator. Equip unit with low oil pressure, low coolant level, high water temperature, overspeed and overcrank automatic safety shutdown.

B. Unit shall be equipped with a Level 1 type control panel including, but not limited to, water jacket temperature indicator with low temperature (below 70 deg. F) warning light, high engine temperature warning light, oil pressure gauge with low pressure warning light, engine shutdown light indicating overcrank, overspeed, low oil pressure, low coolant level, or high engine temperature as the reason for shutdown, voltmeter and ammeter with phase selector switch, frequency meter, voltage adjust rheostat, auto-off-manual start switch, battery voltage meter, total running time indicator, red indicator light for low-battery voltage, red indicator light for low fuel and contacts for remote alarms. A means shall be provided to shut off the audible signal in the event of an above condition but the indicator lights would remain on until the condition was rectified. Additional alarms, if specified in this Section, shall have indication at this panel.

C. Unit shall automatically start upon indication from the automatic transfer switch. Upon transfer of full load, the voltage dip shall not exceed value specified in paragraph 1.03.C, at the rated power factor. Voltage shall be regulated to within 2% of rated value during constant load conditions. Stable operating conditions shall be reestablished within two (2) seconds following any sudden change in load.

D. Generator shall have two (2), UL listed, circuit breakers with electronic trip units on its output. The circuit breaker shall be mounted to be accessible per the NEC.

1. Generator output to load: 800 A

2. Generator output to load bank: 225 A

E. Engine-generator unit shall be installed as indicated on Drawings. Unit shall be mounted on heavy steel base with vibration isolators (Korfund Series L or equal) to reduce the possibility of torsional vibration, and shall conform to seismic requirements. A sufficient number of control wires shall be provided to and from the automatic transfer switch and remote annunciator panel (if specified) for indicated system operation. Critical exhaust
silencer shall be provided to minimize the noise emission from the unit. Silencer shall have mounting brackets with isolators to isolate the silencer vibration from the weather housing.

F. Engine shall have electric starting system including rack-mounted 12-volt storage batteries, starting motor alternator, and automatic battery charger. Batteries shall be maintenance-free type with 60-second cranking capability minimum. Battery charger shall be fed from normal power source under normal conditions. Battery shall be charged by alternator when engine/generator unit is in operation. A dual-rate 10 ampere battery charger shall be provided which shall accept 120 volt AC, single-phase input to provide 12 volt DC output. It shall be fused on the AC input and DC output, incorporate current limiting circuitry, and include a DC ammeter and voltmeter. The charger shall be housed in a NEMA 1 enclosure and vibration mounted on the generator set. An automatic disconnect device shall be provided to remove electrical power upon engine start. Wiring for the charger and all controls shall be provided complete and shall be terminated in the Control and Auxiliary Power Enclosure. The charger shall include LED annunciation for low battery voltage, high battery voltage, battery charger malfunction, and AC failure; and dry contacts for battery charger malfunction and low battery voltage; as required by NFPA-110.

G. The exciter shall be a three-phase, brushless, permanent magnet type with full-wave rectified output.

H. Unit shall have 120 Volt-1500 watt electric water jacket heater with thermostat to ease starting in cold weather. Operating temperature shall be as recommended by the manufacturer.

I. Unit shall also have a battery jacket heater 120 volt-75 watt.

2.04 REMOTE ANNUNCIATOR PANEL

A. The remote annunciator panel shall be located as indicated on Drawings. The panel shall be a flush-mounted NEMA 1 enclosure with a lockable, hinged door.

B. Unit shall be equipped with a Level 1 type control panel including, but not limited to: visual indication of: overcrank, low water temperature (below 70°F), high engine temperature pre-alarm, high engine temperature, low lube oil pressure pre-alarm, low lube oil pressure, overspeed, low coolant level, EPS supplying load, control switch not in automatic position, high battery voltage, low battery voltage, battery charger AC failure, lamp test. Audible alarm indication of: overcrank, low water temperature (below 70°F), high engine temperature pre-alarm, high engine temperature, low lube oil pressure pre-alarm, low lube oil pressure, overspeed, low coolant level, control switch not in automatic position. Generator shutdown control of: overcrank, high engine temperature, low lube oil pressure, overspeed. A means shall be provided to shut off the audible signal in the event of an alarm indication but the visual indication would remain on until the condition was rectified. Additional alarm, if specified, shall have indication at this panel. Provide a break-glass emergency manual stop station.
2.05 WEATHERPROOF SOUND ATTENUATED ENCLOSURE

A. Provide engine generator unit with a weatherproof housing suitable for the intended location. Housing shall be of 14-gauge steel with sufficient bracing and support and zinc phosphate rust inhibiting primer and two finish coats of color satisfactory to the Owner. Housing shall have lockable doors for unit maintenance with stainless steel hinges and locks. Unit shall have externally-mounted generator stop button with vandal protection, and a window for full view of the control panel. The enclosure shall be rated to attenuate the sound to a maximum level of 75.3 dB(A) @ 23 feet.

B. Provide 208/120 volt, fused circuits within the enclosure to power all generator appurtenances. Provide all necessary branch circuits to power generator accessories indicated above.

C. A ground bus bar shall be provided within the enclosure for equipment grounding of the generator and base. The generator neutral conductor shall be connected to the ground bar.

2.06 EXHAUST SYSTEM

A. A complete exhaust system shall be provided by the generator manufacturer. The critical silencer, piping, and associated fittings shall not impose more than 27 inches H2O restriction, and shall include aluminized side-in, end-out exhaust silencer limiting exhaust noise to a maximum 85 dBA measured at 10 feet. Silencer shall include a rain cap and provisions for draining moisture. Provide stainless steel flexible connection and mating weld flanges, gaskets, and Grade 8 hardware. Exhaust silencer shall be mounted within the weatherproof generator enclosure.

2.07 SKID-MOUNTED FUEL TANK

A. The emergency generator shall be supplied fuel by a double-wall, skid-mounted fuel tank with a minimum 2215 gallon capacity. The skid-mounted fuel tank shall also have alarm indication for high fuel, low fuel, and shutdown of the generator due to very low fuel, as a minimum. These alarms shall be tied into and have indication at the generator control panel and the generator annunciator panel.

B. The skid-mounted fuel tank operation shall be controlled by the level in the tank. The two control levels in the skid-mounted fuel tank shall be as follows:

1. If the fuel level drops below this level the low level alarm shall activated.

2. (lowest): If the fuel level drops below this level, the generator shall shut off.

C. These levels shall be set by the manufacturer. The skid-mounted fuel tank shall also have a vent to the outside per the manufacturer. A weather cap shall be on the outside end of the vent.

D. The capacity of the skid-mounted fuel tank shall be such as to provide fuel for a minimum of 2-3 days of standby use at generator 100% output power.
E. The tank shall be equipped with a gauge or other automated measuring device that accurately shows the level of product in the tank and is accessible to the transfer operator prior to initiating the transfer.

F. Provide a tank overfill audible and visual alarm at the tank fill location, visible to the person filling the tank. Set tank overfill alarm at 90% of tank capacity. This alarm system shall be in addition to the tank gauge specified previously.

G. A mechanism that will automatically prevent the flow of oil to the tank when the tank is filled to 95 percent of the total capacity of the tank.

H. Provide an NFPA-compliant sign on the tank indicating tank identification number, capacity, and safe fill height or volume. The sign shall be completely visible and shall be located directly adjacent to the tank fill line.

I. Provide a tank monitoring and leak detection system with the following features:

1. Provide a remote, microprocessor based, tank gauging and leak monitoring system, accurate to a minimum of ± 0.3%. The system shall include a microprocessor based central processing and indicating instrument, tank level sensor and leak detectors.

2. The system shall provide a minimum of four isolated alarm relay contacts for leak detection, overfill alarm, low and critical low level. The control panel shall also have the following features: LED display shall have the capability to display (without scrolling) up to 99,990 gallons of inventory. It shall display the tank content continuously. There shall three programmable level set point alarms. Common audible alarm with associated alarm silence push button.

3. Level Sensor: Liquid level sensor shall be capable of easy installation. The sensor operation and accuracy shall be unaffected by changes in the specific gravity, conductivity, temperature, or pressure of the tank liquid, and be suitable for use with non-corrosive fluids.

4. Leak Detection: Capable of detecting both a discharge of oil from the inner container and an intrusion of water from the surrounding environment into the interstitial space; and constructed such that the testing or sampling methods used are not rendered inoperative by groundwater or rainfall.

5. Overfill Alarm: Install where shown near the tank fill terminal an overfill alarm and silencing station. The alarm station shall have NEMA 4X construction and contain an 85 dB horn or bell, silencing push-button, and “high level” light. An overfill alarm signal from the instrument shall sound the bell and energize the light. If the fill operator does not manually silence the bell, in one minute it will silence automatically. The overfill station will have a test push-button to insure the fill alarm is operational.
6. Fill Alarm Sign: Provide and install inside the remote fill containment port a fill alarm sign. The sign shall bright yellow background and black lettering. Caution Sign Shall Read:

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CAUTION
WHEN ALARM BELL SOUNDS
OIL TANK FILLED TO CAPACITY
DO NOT OVERFILL
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2.08 LOAD TEST BANK (RADIATOR MOUNTED)

A. The load test bank shall be rated 120 kW, Unity power factor, 480 Volts, three-phase, three-wire. The load bank rating shall be suitable to meet NFPA 110 requirements for monthly testing of the generator.

B. The load test bank shall be furnished as a complete system with necessary controls and devices for manual control with automatic load dump on loss of utility power.

C. Load Step Resolution: The load shall be able to be stepped in a minimum of five (5) steps. Tolerance: ±5 percent overall tolerance, ±2 percent phase-to-phase balance.

D. Load resistors shall be fabricated of a corrosion-resistant chromium alloy with a minimum operating temperature of 1900 deg F (1038 deg C). Resistors shall be continuously supported to eliminate possible shorting contact with surrounding resistors.

E. The load bank shall be mounted on the generator radiator core and be an integral part of the generator assembly. The load bank shall have a static pressure drop of approximately 0.1” H2O at design velocity.

F. Overload and overcurrent protection shall be provided for each individual load section and control circuit.

2.09 TEST BANK CONTROL PANEL

A. A remote control panel with a NEMA 4 enclosure shall be provided for installation near the load bank. Devices, mounted on the control panel shall be approved for outdoor installation.

B. The remote control panel shall be furnished with:

2. Fan Control/Failure Reset Switch (Off-Fan, On-Reset).
4. Load Step Switches (Off-On).
5. Fan Running Indication Light (Green).

6. Cooling Failure Light (Red).

7. Load Step Indication Lights (Blue).

8. Apply load when generator is under monthly exercising test.

9. Interlock wiring from the transfer switches that immediately disable the load bank if the transfer switches call for engine start upon loss of normal power.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Cooling system shall have manufacturer-recommended percentage of glycol added.

B. The Contractor shall coordinate with the environmental permitting agency (MassDEP) and provide all permits, inspections, and certifications required, and shall include all auxiliary devices as required by the permit.

3.02 DELIVERY

A. The generator shall be shipped FOB destination to the University.

B. Delivery schedule of the generator shall be coordinated with the University. A space will be identified on the campus for delivery of generator.

C. The equipment supplier shall state in their bid the number of weeks required to deliver equipment after receipt of approved submittals.

End of Section