THIS IS NOT AN ORDER

REQUEST FOR BIDS/PROPOSALS COVERSHEET

# THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Procurement and Contract Services
118 College Drive #5003, Hattiesburg, Mississippi 39406-0001

Date: _____

Name: _____

Company: _____

Address: _____

City/State/Zip: _____

Bid No. 25-

THE UNIVERSITY OF SOUTHERN MISSISSIPPI is considering the purchase of the following item(s). We ask that you submit your bid and retain one copy for your files. Right is reserved to accept or reject any part of your bid. Your quotation will be given consideration if received in Bond Hall, Room 214 on or before:

- D Q X D U \ , 202 2:00 p.m. CDT

Buyer: Millissa Stork

TERMS - Bidder should state terms of sale. Our terms are 2% ten days, net 45 days. These terms will apply per Mississippi law.
AWARDING CONTRACT - Cash terms will not be used as a basis for awarding contracts; however, the University will accept cash discounts when earned.

NOTE: If you cannot quote on the exact material shown, please indicate any exception giving brand name and com specifications of any alternate. If additional space is required, use a separate sheet or letter of transmittal.

| ITEM | QUANTITY | | UNIT PRICE | TOTAL NET PRICE |
|---|---|---|---|---|
| | | DESCRIPTION<br><br>RFP Bid# 25-<br>7 U D Q V I R U P H U I R U W K H Q H Z 2 \ V W H U<br>+ D W F K H U \ E X L O G L Q J R Q * & 5 / V & H G D U<br>3 R L Q W & D P S X V<br><br>RFx 316<br><br>PROPOSAL MUST BE RETURNED TO THE UNIVERSITY IN ACCORDANCE WITH THE SPECIFICATIONS. RFP NUMBER AND DATE OF BID OPENING MUST BE SHOWN ON THE OUTSIDE OF THE ENVELOPE IF USING THAT METHOD | | |

We quote you as above F.O.B. The University of Southern Mississippi. Shipment can be made in ____ days from receipt of order. DATE _____ TERMS _____
Return quotation to Procurement Services at above address.

AA/EOE/ADAI

Signature Required _____

2.2. The primary voltage, configuration, and the basic lightning impulse insulation level (BIL) shall be 12,470-volt DELTA @ 95 kV BIL. **The contractor MUST field verify primary voltage and provide voltage available at site.**

The secondary voltage, configuration, and the basic insulation level (BIL) shall be 480Y/277 WYE @ 30 kV BIL.

2.3. The transformer shall be furnished with full capacity high-voltage taps. The taps shall be +/- 2 - 2½% above and below nominal voltage The tap changer shall be clearly labeled to reflect that the transformer must be de-energized before operating the tap changer as required in Section 3.3 of ANSI C57.12.26. Taps shall be provided on the higher voltage of dual voltage primary units. The tap changer switch shall be an externally operated, snap action switch with a hotstick-operable handle.

2.4. The average winding temperature rise above ambient temperature, when tested at the transformer rating, shall not exceed 65 C at the base transformer rating, shall not exceed 55 C, and when tested at 112% of the base rating, shall not exceed 65 C.

2.5. The percent impedance voltage, as measured on the rated voltage connection, shall be per Table 2. For target impedances, the tolerance on the impedance shall be +/- 7.5% of nominal value for impedance values greater than 2.5%. The tolerance on the impedance shall be +/- 10.0% for impedance values less than or equal to 2.5%.

**Table 2 - Percent Impedance Voltage**

| KVA Rating | Impedance |
|---|---|
| 75 | 3.00 -- 5.75 |
| 112.5-300 | 5.00 – 5.75 |
| 500 | 5.00 – 5.75 |
| 750-3750 | 5.75 nominal |

2.6. **The contractor MUST submit this item for review by the engineer. The contractor MUST provide a letter signed by the responsible agent of the electrical contractor stating the following:**

**PLEASE BE ADVISED THAT I HAVE REVIEWED THE DRAWINGS AND HAVE FIELD VERIFIED THAT THE PRIMARY VOLTAGE ON THE PROJECT IS: _____. I HAVE ALSO REVIEWED THE SECONDARY VOLTAGE FOR THIS PROJECT AND IT IS: _____. I UNDERSTAND THAT IF THE TRANSFORMER IS APPROVED BY THE ENGINEER AT THIS VOLTAGE AND IT IS DETERMINED THAT THIS IS NOT CORRECT THAT I WILL BE RESPONSIBLE FOR REPLACING THIS TRANSFORMER AT NO COST TO THE OWNER OR ENGINEER.**

_____ _____
**SIGNATURE** **DATE**

**The transformer submittal will be REJECTED without this form.**

3. HIGH VOLTAGE BUSHINGS AND TERMIN¾R . ˛ĊĀ Ŏ ŋĐIN¾R . MOș MOș T A '

6.1. Core and coil

The core and coil shall be vacuum processed to ensure maximum penetration of insulating fluid into the coil insulation system. While under vacuum, the windings will be energized to heat the coils and drive out moisture, and the transformer will be filled with preheated filtered degassed insulating fluid. The core shall be manufactured from burr-free, grain-oriented silicon steel and shall be precisely stacked to eliminate gaps in the corner joints. The coil shall be insulated with B-stage, epoxy coated, diamond pattern, insulating paper, which shall be thermally cured under pressure to ensure proper bonding of conductor and paper.

**Copper windings shall be provided.**

6.2. Dielectric fluid

The dielectric coolant shall be listed less-flammable fluid meeting the requirements of National Electrical Code Section 450-23 and the requirements of the National Electrical Safety Code (IEEE C2-2002), Section 15. The dielectric coolant shall be non-toxic*, non-bioaccumulating and be readily and completely biodegradable per EPA OPPTS 835.3100. The base fluid shall be 100% derived from edible seed oils and food grade performance enhancing additives. The fluid shall not require genetically altered seeds for its base oil. The fluid shall result in zero mortality when tested on trout fry *(per OECD G.L. 203). The fluid shall be certified to comply with the US EPA Environmental Technology Verification (ETV) requirements, and tested for compatibility with transformer components. The fluid shall be Factory Mutual Approved, UL Classified Dielectric Medium (UL-EOUV) and UL Classified Transformer Fluid (UL-EOVK), Envirotemp FR3™ fluid.

6.3. Tank and Cabinet Enclosure

6.3.1. The high-voltage and low-voltage compartments, separated by a metal barrier, shall be located side-by-side on one side of the transformer tank. When viewed from the front, the low-voltage compartment shall be on the right. Each compartment shall have a door that is constructed so as to provide access to the high-voltage compartment only after the door to the low-voltage compartment has been opened. There shall be one or more additional fastening devices that must be removed before the high-voltage door can be opened. Where the low-voltage compartment door is of a flat panel design, the compartment door shall have three-point latching with a handle provided for a locking device. Hinge pins and associated barrels shall be constructed of corrosion-resistant material, passivated AISI Type 304 or the equivalent.

6.3.2. A recessed, captive, penta-head bolt that meets the dimensions per ANSI C57.12.28 shall secure all access doors.

6.3.3.

6.3.6. The tank shall be constructed to withstand 7 psi without permanent deformation, and 15 psi without rupture. The tank shall include a 15psig pressure relief valve with a minimum flow rate of 35 SCFM.

6.3.7. The tank and cabinet coating shall meet all the requirements of ANSI C57.12.28 including:

Salt Spray Test
Crosshatch Adhesion Test
Humidity Test
Impact Test
Oil Resistance Test
Ultraviolet Accelerated Weathering Test
Abrasion Resistance - Taber Abraser

6.3.8. The exterior of the unit shall be painted Munsell 7GY3.29/1.5 green in color. The cabinet interior and tank face shall be painted gray for ease of viewing the inside the compartment.

6.3.9. The tank shall be complete with an anodized aluminum laser engraved nameplate. This nameplate shall meet Nameplate B per ANSI C57.12.00.

7. ACCESSORIES

The following accessories shall be provided

Bolted main tank cover (1000 kVA and below)
Welded Main Tank Cover with bolted handhole (1500 kVA and above)
1.0” upper fill plug
1.0” drain plug in LV compartment (45-500 kVA)
1.0” drain valve w/ sampling device in LV compartment (750-3750 kVA)
Automatic pressure relief valve
Metal drip shield with bayonets
20” deep cabinet
Ground provisions per C57.12.34 section 9.11.
Meet NEMA TR-1 sound levels
Liquid level gauge
Dial-type thermometer gauge
Pressure vacuum gauge
**“Transformers shall conform to DOE 2010 standard efficiency levels for liquid immersed distribution transformers, as specified in Table I.1 of the Department of Energy ruling, “ 10 CFR Part 431 Energy Conservation Program for Commercial Equipment: Distribution Transformers Energy Conservation Standards; Final**

8. SHIPPING

Units 1000 kVA and larger shall be loaded and unloaded with overhead cranes, so a pallet is not to be provided for these transformers. **The contractor will be responsible to unload the transformer and store it in a safe location until the final location beat ‘**

Clarion Ledger