



INVITATION FOR BIDS
OFFICE OF PROCUREMENT & CONTRACTS

1. INSTRUCTIONS FOR BIDDERS

- a. Sealed bids will be received in the Office of Procurement & Contracts, Mississippi State University, for the purchase of the items listed herein.
- b. All bids must be received in the Office of Procurement & Contracts on or before the bid opening time and date listed herein. Delivery of bids must be during normal working hours, 8:00 a.m. to 5:00 p.m. CST, except on weekends and holidays when no delivery is possible.
- c. Bidders shall submit their bids either electronically or in a sealed envelope.
 - i. Sealed bids should include the bid number on the face of the envelope as well as the bidders' name and address. Bids should be mailed to: 245 Barr Avenue, 610 McArthur Hall, Mississippi State, MS 39762.
 - ii. At this time we only accept non-ITS bids electronically. For electronic submission of bids, go to: <https://portal.magic.ms.gov> and use the RFX number on the next page as your reference number.
- d. All questions regarding this bid should be directed to the Office of Procurement & Contracts at 662-325-2550.

2. TERMS AND CONDITIONS

- a. All bids should be bid "FOB Destination"
- b. Bidders must comply with all rules, regulations, and statutes relating to purchasing in the State of Mississippi, in addition to the requirements on this form. General Bid Terms and Conditions can be found here:
https://www.procurement.msstate.edu/procurement/bids/Bid_General_Terms_May_2019_V2.pdf
- c. Any contract resulting from this Invitation for Bid shall be in substantial compliance with Mississippi State University's Standard Contract Addendum:
<https://www.procurement.msstate.edu/contracts/standardaddendum.pdf>

Bid Number/RFX Number: 23-05/RFX#3160005611

Opening Date: January 11, 2023 @2:00 p.m.

Description: Pad Mounted Switchgear and 15 kV Cable (Material Only)

Vendor Name: _____

Vendor Address: _____

Telephone Number: _____

Days the Offer is Firm: _____

Authorized Signature: _____

Name: _____

Title: _____

See following pages for specifications and bid pricing form.

**Specifications & Materialman's Proposal
For
Pad Mounted Switchgear and 15 kV Cable
(Material Only)**



December 9, 2022

Prepared for:

Mississippi State University
610 McArthur Hall
Mississippi State, Mississippi 39762

Prepared by:

Atwell & Gent, P.A.
309 University Drive
Starkville, Mississippi 39759



Job No.: 601E3081

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INSTRUCTION TO BIDDERS

PAD MOUNTED SWITCHGEAR AND 15 KV CABLE (MATERIAL ONLY)
MISSISSIPPI STATE UNIVERSITY
MISSISSIPPI STATE, MISSISSIPPI

Refer to Bid Advertisement for bid opening time and date.

SUBMITTAL OF SEALED PROPOSALS: Bids that are sent by mail shall be clearly marked "Bid Enclosed" or "Bid Envelope Enclosed" as appropriate. The sealed envelope containing the bid shall have the following information shown on the envelope:

BID ENCLOSED

ITEM: PAD MOUNTED SWITCHGEAR AND 15 KV CABLE (MATERIAL ONLY)
OWNER: MISSISSIPPI STATE UNIVERSITY
MISSISSIPPI STATE, MISSISSIPPI
BIDDER: BIDDER'S ADDRESS
BID DUE: REFER TO ADVERTISEMENT FOR BIDS

Bids that are sent by parcel delivery service or hand-delivered should be addressed to:

Mr. Don Buffum, Director
Office of Procurements & Contracts
Mississippi State University
Barr Avenue, 610 McArthur Hall
Mississippi State, Mississippi 39762

Bids that are sent by mail should be addressed to:

Mr. Don Buffum, Director
Office of Procurements & Contracts
Mississippi State University
P.O. Box 5307
Mississippi State, Mississippi 39762

SUBMITTAL OF ELECTRONIC BIDS: Each electronically submitted bid must be submitted in "pdf" format and shall contain the same information and forms as required for the paper bids. In the event that an electronically submitted bid has a corrupted attachment, the bid will be considered null and void.

The Engineer for this project is:

Atwell & Gent, P.A.
P.O. Box 2558
Starkville, Mississippi 39760-2558
Telephone (662) 324-5658

The Engineer will represent the Owner in all matters pertaining to this project, including but not limited to, answering technical questions of prospective bidders and recommendations of lowest and best bid, acceptance of shop drawings and similar documents, and approval of invoices prior to payment by the Owner.

Submit all questions about the specifications to the Engineer, in writing. Replies will be issued to all prospective Bidders of Record. Neither the Engineer nor the Owner will be responsible for oral clarifications.

BID PREPARATION:

Bidders shall complete all blank spaces on the Materialman's Proposal Form for each item of equipment being bid in accordance with these specifications and terms and conditions. Bidder should insert the unit price in the blank under the Unit Price heading and multiply this unit price by the number shown in the Number Required heading and enter the product of this multiplication in the blank under the heading Total Price for each bid item on the Materialman's Proposal Form. The bidder shall sum the Total Bid Price for each Bid Item and enter this sum in the Total Bid Price.

Bidder shall insert the delivery time in weeks after receipt of an order for each item of equipment bid in the blank provided on the Materialman's Proposal Form. Bidder shall also indicate equipment being bid by the manufacturer's name and catalog number in the blanks provided on the Proposal Form.

Bidder shall complete the Materialman's Proposal Form bound in these Specifications and shall submit two copies to the OWNER at the time that the bids are due. Bidders taking exceptions to any part of the specifications, conditions, or payment terms specified herein shall show such exception on the Materialman's Proposal Form in the space provided. If exceptions are not shown on the Proposal Form, Bidder must supply equipment specified herein under the terms and conditions specified herein. Proposal forms shall remain bound in the Specifications. Proposals that are modified, excepted, or in any way changed from the proposal that the OWNER is requesting in this request for proposals may be rejected by the OWNER.

BID AWARD:

Group #1: Bid Items No. 1 through No. 3 will be awarded on an aggregate-low basis to the bidder with lowest and best responsive bid for Bid Items No. 1 through and No. 3 inclusive.

Group #2: Bid Items No. 4 and No. 5 will be awarded on an aggregate-low basis to the bidder with lowest and best responsive bid for Bid Items No. 4 and No. 5 inclusive.

Note: It is not necessary to bid all bid items; however, it is necessary to bid all bid items within any specific group. Failure to bid all items within a group may cause bid to be disregarded. Unusually long delivery promises may cause bid to be disregarded.

PROPOSAL FORM

PAD MOUNTED SWITCHGEAR AND 15 KV CABLE (MATERIAL ONLY)
MISSISSIPPI STATE UNIVERSITY
MISSISSIPPI STATE, MISSISSIPPI

To: Mr. Don Buffum, Director
Office of Procurements & Contracts
Mississippi State University
Barr Avenue, 610 McArthur Hall
Mississippi State, Mississippi 39762

The undersigned (hereinafter called the MATERIALMAN) acknowledges by his signature that he has received and examined the documents entitled "Specifications and Materialman's Proposal for **PAD MOUNTED SWITCHGEAR AND 15 KV CABLE (MATERIAL ONLY)** for Mississippi State University (hereinafter called the OWNER), dated December 9, 2022, and has included the provisions of the Specifications in his Proposal. The MATERIALMAN further acknowledges that he has received the following addenda:

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

The Materialman hereby proposes to sell and deliver to OWNER, upon the terms and conditions herein stated, the equipment specified in the attached specification for the following sums:

<u>Bid Item</u>	<u>Description</u>	<u>Unit Price</u>	<u>No. Req'd</u>	<u>Unit</u>	<u>Total Price</u>
#1	750 kCMIL Aluminum 15 kV JCN UD Cable	_____	2,400	LF	_____
#2	#2/0 Copper 15 kV JCN UD Cable	_____	1,050	LF	_____
#3	#2 Copper 15 kV JCN UD Cable	_____	600	LF	_____
TOTAL BID FOR BID ITEMS #1 THROUGH #3 (GROUP #1) INCLUSIVE					_____
#4	Pad Mounted Switchgear 15 kV, 5-Way	_____	1	EA	_____
#5	Pad Mounted Switchgear 15 kV, 6-Way	_____	1	EA	_____
TOTAL BID FOR BID ITEMS #4 AND #5 (GROUP #2) INCLUSIVE					_____

Note: Refer to Instructions to Bidders. **It is not necessary to bid all bid items; however, it is necessary to bid all bid items within any specific group (e.g., bid all items in Group #2).**

- A. The total prices set forth above shall be firm if accepted by the OWNER within fifteen (15) days and shall include delivery to OWNER, ready for OWNER's use. The OWNER will unload electric distribution materials at MSU Facilities Management.
- B. The prices set forth herein do not include any sums which are, or which may be payable by the MATERIALMAN on account of taxes imposed by any taxing authority upon the sale, purchase, or use of the equipment. If any such tax is applicable to the sale, purchase, or use of the equipment, the amount thereof shall be added to the purchase price and paid by the OWNER.
- C. The times of delivery shall be as follows:

BID ITEM NO. 1 _____

BID ITEM NO. 2 _____

BID ITEM NO. 3 _____

BID ITEM NO. 4 _____

BID ITEM NO. 5 _____

- D. The items included in each of the above bid prices are as follows:

BID ITEM NO. 1

MANUFACTURER _____

CATALOG NO. _____

BID ITEM NO. 2

MANUFACTURER _____

CATALOG NO. _____

BID ITEM NO. 3

MANUFACTURER _____

CATALOG NO. _____

BID ITEM NO. 4

MANUFACTURER _____

CATALOG NO. _____

BID ITEM NO. 5

MANUFACTURER _____

CATALOG NO. _____

E. Title of the equipment shall pass to the Owner upon:

1. Delivery to location specified.
2. Satisfactory inspection for in-transit damage.
3. Acceptance by the Owner.

F. Bidder hereby certifies that he is:

() Manufacturer

() Manufacturer's Authorized Mississippi Representative

G. Exceptions: _____

H. It is understood by the undersigned that the OWNER retains the privilege of accepting or rejecting all or any part of this proposal and to waive any informalities or technicalities therein. Counterproposals or qualified bids shall be subject to rejection at the discretion of the OWNER.

It is also understood by the undersigned that the OWNER reserves the right to conduct investigations to evaluate the proposals received and to award the bid for this equipment to the lowest Bidder, who in the OWNER's evaluation will provide the equipment which will be in the best interest of the OWNER.

MATERIALMAN:

BY: _____

TITLE: _____

COMPANY: _____

ADDRESS: _____

TELEPHONE NO.: _____

EMAIL: _____

DATE SIGNED: _____

APPENDIX A
ELECTRIC DISTRIBUTION MATERIALS
BILL OF MATERIALS

BID ITEM NO.	BID ITEM	BID ITEM MANUFACTURER/CATALOG DATA	QTY. REQUIRED	UNIT
GROUP #1 - UNDERGROUND CABLE				
1	CABLE, JACKETED CONCENTRIC NEUTRAL, 750 KCMIL ALUMINUM, 220 MIL, 15 KV, 1/3 NEUTRAL	OKONITE "162-23-3096", KERITE "175A15-C3200", PRYSMIAN "QNX000A", OR EQUAL BY SOUTHWIRE - FURNISHED ON THREE (3) 800 FOOT REELS	2,400	FEET
2	CABLE, JACKETED CONCENTRIC NEUTRAL, #2/0 COPPER, 220 MIL, 15 KV, 1/3 NEUTRAL	OKONITE "140-23-9025", KERITE "121C15-C3200", PRYSMIAN "QN9000A", SOUTHWIRE "60.80.29" - FURNISHED ON THREE (3) 350 FOOT REELS	1,050	FEET
3	CABLE, JACKETED CONCENTRIC NEUTRAL, #2 COPPER, 220 MIL, 15 KV, FULL NEUTRAL	OKONITE "141-23-9460", KERITE "102C15-C1200", PRYSMIAN "QN4010A", OR EQUAL BY SOUTHWIRE - FURNISHED ON THREE (3) 200 FOOT REELS	600	FEET
NOTE: MAXIMUM REEL SIZE SHALL BE 72" FLANGE HEIGHT x 56" OUTSIDE WIDTH. ACTUAL CABLE LENGTHS PER REEL SHALL NOT BE LESS THAN SPECIFIED OR MORE 5% GREATER THAN SPECIFIED (MINIMUM TOLERANCE 0%, MAXIMUM TOLERANCE 5%)				
GROUP #2 - PAD MOUNTED SWITCHGEAR				
4	PAD MOUNTED SWITCHGEAR, 15 KV, 5-WAY	S&C ELECTRIC VISTA "523" OR EQUAL	1	EA
5	PAD MOUNTED SWITCHGEAR, 15 KV, 6-WAY	S&C ELECTRIC VISTA "633" OR EQUAL	1	EA
NOTE: REFER TO TECHNICAL SPECIFICATIONS IN APPENDIX B.				

APPENDIX B

PAD MOUNTED SWITCHGEAR SPECIFICATIONS

1.1 SCOPE

A. Section Includes:

1. Bid Items
2. References.
3. Submittals.
4. Quality Assurance.
5. Critical Requirements.
6. Construction.

1.2 BID ITEMS

- A. Bid Item #4: S&C Electric Vista "523" Pad Mounted Switchgear Unit or equal.
- B. Bid Item #5: S&C Electric Vista "633" Pad Mounted Switchgear Unit or equal.

1.3 REFERENCES

A. American National Standards Institute (ANSI):

1. ANSI C37.72 - Manually Operated, Dead Front Padmounted Switchgear with Load Interrupting Switches and Separable Connectors for Alternating Current Systems.
2. ANSI C37.112 -IEEE Standard Inverse-Time Characteristic Equations for Overcurrent Relays.
3. ANSI C57.12.28 - Pad-Mounted Equipment - Enclosure Integrity.

B. Institute of Electrical and Electronics Engineers:

1. IEEE 386 - Standard for Separable Insulated Connector Systems for Power Distribution Systems above 600 V.

C. National Electrical Manufacturers Association:

1. NEMA 260 - Safety Labels for Pad Mounted Switchgear and Transformers Sited in Public Areas.

1.4 SUBMITTALS

- A. Submit catalog data on all equipment items specified in this section to be utilized on this Project.
- B. Sufficient information, clearly presented shall be included to determine compliance with Drawings and Specifications.

- C. The specific item proposed and its area of application shall be marked on the catalog cuts.
- D. Shop Drawings: Indicate electrical characteristics and connection requirements, outline dimensions, connection and support points, weight, specified ratings and materials.
- E. Product Data: Submit electrical characteristics and connection requirements, standard model design tests, and options.
- F. Test Reports: Indicate procedures and results for specified factory and field testing and inspection.

1.5 QUALITY ASSURANCE

- A. Furnish manufacturer's standard one-year warranty on pad mounted switchgear.
- B. Switchgear shall be manufactured within the United States of America.

1.6 CRITICAL REQUIREMENTS

A. Product Description:

1. Bid Item #4: ANSI C37.72 pad mounted switchgear, 15 kV, 600 ampere, SF6 insulated, deadfront construction, with two (2) switched ways and three (3) fault interrupter way, with switchgear cabinet, suitable for installation where accessible by general public.
2. Bid Item #5: ANSI C37.72 pad mounted switchgear, 15 kV, 600 ampere, SF6 insulated, deadfront construction, with three (3) switched ways and three (3) fault interrupter way, with switchgear cabinet, suitable for installation where accessible by general public.

B. Ratings:

1. System Voltage: 13.2 kV nominal, three phase, 60 Hz.
2. Maximum Design Voltage: 15.5 kV.
3. Insulation Type and Level: SF6 insulated, 95 kV BIL.
4. Main Bus and Switch Ampacity: 600 amperes, continuous.
5. Short Circuit Rating: 12,500 rms symmetrical amperes at rated nominal voltage.

C. Construction:

1. Single-sided Construction. All cable terminations shall be located on one side of the switchgear unit.
2. Cable Grounding: All ways, both load interrupter switch and fault interrupter, shall be three-position type (closed- open- ground).
3. Cabinet Height: Switchgear cabinet shall be low profile and in no case shall its overall height exceed 54".
4. Bushing Heights: 24" or higher. For switchgear with lower bushing heights, switchgear shall be furnished with hot-dip galvanized riser platform as required to provide 24" or higher bushing height.

D. Controls: Provide microprocessor-based overcurrent control for switchgear unit. Control shall incorporate ANSI C37.112 relay curves. Switchgear shall be capable of being programmed using a laptop computer. The control shall at a minimum feature the following time-current characteristic (TCC) curves:

1. Standard "E" speed curves.
2. Standard "K" speed curves.
3. IEEE C37.112-1996 "U" relay curves. Time dial settings shall be available in 0.1 increments from 0.0 to 10.0.

Controls provided shall be manufacturer's most advanced model available.

E. Potential Indication with Test Feature: Provide LCD display to indicate presence of voltage on each phase, and solar panel to supply power for testing of complete voltage-indication circuit and phasing circuit. One potential indicator shall be provided for each bus-terminal, load interrupter switch, and fault-interrupter way.

1.7 CONSTRUCTION

A. Switching:

1. Bid Item #4: Two (2) three-pole load interrupter switches and three (3) three-pole fault interrupter switch.
2. Bid Item #5: Three (3) three-pole load interrupter switches and three (3) three-pole fault interrupter switch.

B. Switchgear Tank: Welded stainless steel.

C. Pad Mount Enclosure: Steel, conforming to requirements of ANSI C37.72 and C57.12.28.

D. Finish Color: The exterior of the unit shall be painted Carboline F235 Dark Bronze (or as accepted).

E. Load Interrupter Switches:

1. Three-position (closed-open-ground) type. The load interrupter switches shall provide three-pole live switching of 600-ampere three phase circuits.
2. Load interrupter switches shall provide a visible gap when open.
3. Operating shafts shall be pad lockable in any position. The operating shaft shall be capable of being locked to prevent operation to the ground position.
4. The load interrupter switches shall be furnished with a manual handle to charge the switch operating mechanism or to actuate the operating mechanism. Operating mechanism shall be capable of providing quick-make, quick break operation in either switching direction. The operating mechanism shall be designed to prevent inadvertent operation from the closed position directly to the ground position and vice versa.
5. Load interrupter switch terminals shall be equipped with three single pole 600-ampere bushings designed to ANSI/IEEE 386 Standards to accept all standard 600-ampere insulated deadbreak elbows.

F. Fault Interrupter Switches:

1. Three-phase resettable fault interrupters shall be provided in the switchgear for live switching of tap circuits and for fault interruption of tap circuits. Fault interrupters shall be vacuum or arc spinning contact type.
2. The fault interrupters shall be operated by a spring operating mechanism that is recharged with a manually operated handle. The operating mechanism shall operate independently of the speed of the manual handle. Trip indicators shall be provided on the fault interrupters that indicate the contact position is open. This indicator shall be fully visible through viewing windows in the switchgear tank.
3. Fault interrupters shall provide three-pole fault interruption and three-pole load switching.
4. The fault interrupters shall be non-reclosing, manual reset devices. An electronic assembly shall sense load and fault current on each phase of the load tap circuits. The electronic control shall be powered from current transformers mounted inside of the SF6 insulated switchgear tank. No external power source shall be required for overcurrent protection.
5. Fault interrupter switch terminals shall be equipped with three single pole 200-ampere bushings designed to ANSI/IEEE 386 Standards to accept all standard 200-ampere insulated loadbreak elbows.

G. Grounding Lugs: Furnished with one ground pad installed on switchgear unit and one ground pad installed on pad mount enclosure. Ground pads shall be NEMA two-hole type.

H. Labeling: Furnish safety labels in accordance with NEMA 260.

I. Accessories:

1. Mounting Provisions for Fault Indicator: Provide mounting provisions for fault indicators installed on each phase of load interrupter switches. Provide viewing windows for fault LED indicating lights for each phase of all load interrupter switches (e.g. three (3) per load interrupter switch).
2. Potential Indication with Test Feature: Provide LCD display to indicate presence of voltage on each phase, and solar panel to supply power for testing of complete voltage-indication circuit and phasing circuit. One potential indicator shall be provided for each bus-terminal, load interrupter switch, and fault-interrupter way.

J. Controls: Provide standard microprocessor-based overcurrent control for switchgear unit. Control shall incorporate ANSI C37.112 relay curves. Switchgear shall be capable of being programmed using a laptop computer. The control shall at a minimum feature the following time-current characteristic (TCC) curves:

1. Standard "E" speed curves.
2. Standard "K" speed curves.
3. IEEE C37.112-1996 "U" relay curves. Time dial settings shall be available in 0.1 increments from 0.0 to 10.0.

Controls provided shall be manufacturer's most advanced model available. Switchgear shall be furnished with all required Windows-compatible software and programming cables,

adapters, and all other components required to field program control from standard laptop computer.

Demonstration and Field Training: Manufacturer shall include four hours of on-site training by a factory authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain medium-voltage switchgear units and controls