



Frankfort Plant Board
Electric

BID INVITATION #1655

ISSUED ON

April 11, 2018

BY

**THE ELECTRIC & WATER PLANT BOARD OF THE
CITY OF FRANKFORT, KENTUCKY**

FOR

69KV Circuit Breaker

TO BE OPENED ON

April 25, 2018 at 10AM Local Time

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69KV BREAKER

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III. ADVERTISEMENT FOR BID

**The Frankfort Plant Board
305 Hickory Drive
P.O. Box 308
Frankfort, KY 40602**

Sealed Bids for the furnishing of materials with all related appurtenances will be received by the Frankfort Plant Board until 10:00 a.m. local time, April 25, 2018; and then opened and publicly read aloud.

Specifications may be examined at the following location:

Frankfort Plant Board
Electric Dept.
305 Hickory Drive
Frankfort, KY 40601
(502) 352-4608

No bidder may withdraw his bid for a period of ninety (90) days after closing time scheduled for the receipt of Bids.

The Plant Board reserves the right to waive informalities and to accept or to reject any and all bids.

**TRAVIS McCULLAR
ELECTRIC DEPT.**

IV. INSTRUCTIONS TO BIDDERS

1. SUBMISSION OF BIDS

A. The following certificates or notices are included as a part of this documentation and shall be returned as a part of the bid response package.

- An Equal Employment Opportunity Compliance (EEOC) Certificate
- A Certification of Non-segregated Facilities (CONF)
- A General Safety Program (GSP) Notice
- A Drug free Workplace Compliance (DWC)

B. Each bid should be in a SEPARATE SEALED ENVELOPE and have typed on the envelope the INVITATION NUMBER, OPENING DATE, AND TIME. No responsibility will be attached to the Frankfort Electric & Water Plant Board for the premature opening of or failure to open a bid not properly addressed or identified.

Bids must be received in the office of the Frankfort Electric & Water Plant Board, 305 Hickory Drive, P.O. Box 308, Frankfort, Kentucky, 40602, in a sealed envelope not later than the time specified for opening of bids, at which time all bids received will be publicly opened and read in the Bid Opening Room. It shall be the Bidder's responsibility that the bids are delivered to the above address no later than the time specified. Bidders are invited to attend public bid openings; also, to review complete bid files after awards have been made.

C. Bids may be rejected unless filled out in ink or typewritten and signed in ink by a proper agent of the firm.

D. Telegraphic bids, facsimile bids, or modifications of bids by telegram are not acceptable.

E. Conditional bids are not acceptable.

F. It is the responsibility of each Bidder before submitting a Bid to:

- Examine the Bid and Contract documents thoroughly.
- Consider federal, state, and local laws and regulations that may affect cost, progress, performance, or furnishing of the work.
- Study and carefully correlate Bidder's observations with the Bidding and Contract documents and notify Owner of all conflicts, errors, and/or the discrepancies.

G. All bids shall remain subject to acceptance for a period of ninety (90) days after the date of the Bid opening.

- H. Retain one complete copy of the bid for your file and return original with your bid.
- I. Bids may be withdrawn at any time prior to opening upon written request by the bidder. Negligence on the part of the bidder in preparing his bid shall not constitute a right to withdraw bid after it has been opened.
- J. Bidders are invited to attend public bid opening; also, to review complete bid files after awards have been made.

2. BID SCHEDULE/SIGNATURE PAGE

- A. Bidders should quote on the basis of a lump sum stated in this invitation.

For discrepancies between figures and written amounts, precedence will be given to the written amounts.

- B. Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.
- C. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.
- D. All names must be typed or printed below the signature.
- E. The Bid shall contain an acknowledgement of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).
- F. The address, telephone number and contact person for communications regarding the Bid must be shown.

3. QUALIFICATIONS OF BIDDERS

- A. To demonstrate qualifications to perform work, each Bidder must be prepared to submit within five (5) days of Owner's request, written evidence such as financial data; previous experience, present commitments and other such data as may be called for. The Owner may make an investigation as deemed necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data for this purpose, as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

4. AWARD OF BID

- A. The Owner reserves the right to reject any and all Bids and to waive informalities or minor defects. Any Bid may be withdrawn prior to the above scheduled time for the opening of Bids or authorized postponement thereof. Any Bid received after the time and date specified shall not be considered. No Bidder may withdraw a bid within 90 days after the actual date of opening thereof. Should there be reasons why the contract cannot be awarded within the specified period; the time may be extended by mutual agreement between the Owner and the Bidder. In the event that the lowest responsive and responsible bid is within the Owner's budget, the Contract will be awarded to the lowest responsive and responsible Bidder which, in the Owners sole and absolute judgment, will best serve the interest of the Owner.
- B. In determining the lowest responsive and responsible Bidder, the following elements, including but not limited to, will be considered: (1) lowest price, (2) if the Bidder has a satisfactory performance record, (3) if the Bidder has a suitable financial status to meet obligations incidental to the work, (4) if the Bidder involved maintains a permanent place of business, (5) if the Bidder has adequate personnel and equipment to perform the work properly within the time allotted, (6) number of and acceptability by the Owner of any and all proposed Subcontractors, (7) the completeness and regularity of the Bid Schedule and (8) time schedule of delivery. In addition, the Owner may consider in making the determination, (1) the selection of equipment (or materials), (2) alternate equipment (or materials), and (3) deductions or other modifications listed in the Bid Schedule.

INSURANCE SHIPPING

All prices quoted shall be on a delivered prepaid basis F.O.B. destination including insurance of the goods in an amount equal to their value.

V. GENERAL CONDITIONS

The information contained within the “General Conditions” portion of this document applies to all items in this bid document. The specifics will follow and will describe in detail the items to be bid.

A. Data to Accompany Bid:

1. Include two (2) copies of the Manufacturer’s equipment specification data that includes all electrical and mechanical parameters, including but not limited to:
 - a. Routine testing procedure
 - b. General arrangement and dimensional data
 - c. Listing of supplied accessories
 - d. Conditions of sale and warranty data

B. EVALUATION OF BIDS:

Bids will be evaluated on the parameters as set forth in this specification.

C. CORRESPONDENCE:

1. Address all general correspondence and bid information to the Purchasing Agent:

Leigh Ann Phillips, Purchasing Agent
Frankfort Electric and Water Plant Board
P.O. Box 308
Frankfort, Kentucky 40602
lphillips@fewpb.com

2. Address all technical correspondence, drawings, test data, approvals, etc. to the Engineer:

Travis McCullar, PE
Electrical Engineer
Frankfort Electric and Water Plant Board
P.O. Box 308
Frankfort, Kentucky 40602
tmccullar@fewpb.com

3. Provide the Purchasing Agent and the Engineer with the appropriate contact personnel for correspondence.

D. DELIVERY & IDENTIFICATION:

1. All equipment, materials, drawings packing slips and other items associated with this bid, shall be identified at a minimum with:

INVITATION NO.1655
Frankfort Electric and Water Plant Board
Frankfort, Kentucky 40601

2. All equipment and materials to be supplied under this bid shall be delivered to:

Frankfort Electric and Water Plant Board
305 Hickory Drive
Frankfort, Kentucky 40601
Between 7:30AM to 3:00 PM M-F

3. Arrange, pay for, and coordinate the shipping and handling of all equipment and materials, to the point of delivery.
4. Notify Purchasing Agent at least 15 days prior to each shipment and include a description of the equipment being shipped, method of shipment, expected delivery date and shipping weight.
5. Failure to provide proper delivery notification, as herein requested, and results in an expense to be incurred by the Frankfort Electric and Water Plant Board will be charged to the bidder.
6. **All** items shall be clearly **marked externally** and have a packing slip identifying the contents.

E. SHOP DRAWINGS:

1. Approval drawings shall consist of (but not limited too) outline drawing, elevation drawings, wiring diagram, nameplate drawings, part details, anchor bolts (if applicable) and, erection diagrams.
2. Manufacturer shall check all drawings for accuracy and conformance to the specifications prior to submittal.
3. Provide two (2) sets of shop drawings to the Engineer. Following review, one set will be returned marked as follows: approved as submitted or approved with changes. Drawings normally will be returned within 15 days following receipt.

4. Engineer's approval in no way eliminates the manufacturer from His responsibility to adhere to acceptable engineering practice, applicable codes, national standards, these specifications and recognized construction procedures.

F. INFORMATION FOR THE ENGINEER:

1. Mail one complete set of instructions and maintenance manuals on CD in Word document, Adobe pdf, or Autocad formats as appropriate, to the Engineer within 60 days of receipt of the approval drawings. These shall consist of revisions resulting from the return of ; approval drawings, outline drawing, wiring diagrams, nameplate drawings, instructions, part details, anchor bolts template(if applicable) installation instructions, bill of materials including catalog numbers and manufacturers' name for all equipment, shop fabrication details, and configuration drawing showing size and weight.

2. One additional set of hardcopy instruction and maintenance manuals shall be mailed separately and prior to shipment of the equipment.

3. One additional set of hardcopy instruction and maintenance manuals shall be included with the equipment.

4. A total of three (3) sets of instruction and maintenance manuals are requested (one CD electronic version and two hardcopy paper versions).

5. Within 30 days following shipment provide one hard copy of certified test reports, per each piece of equipment ordered, which defines the tests and lists the test results signed by the Manufacturer's registered Engineer. Also, provide one, CD with all drawings in Autocad format, test results, part details, instructions, bill of materials and other information having to do with the construction, repair, operation, connection, and spare parts of the equipment being supplied. All documents are to be provided in Microsoft Word or Adobe pdf.

G. TESTING:

1. Factory tests shall include all tests as specified in ANSI/IEEE Std. C37.06, "American Standard Test procedure for AC High Voltage Circuit Breakers" and other applicable ANSI and NEMA standards including any additional tests as specified in this document.

2. The Engineer shall be immediately notified of any damage occurring during construction of the equipment specified herewithin and all tests that do not meet specified or standard values. The purchaser shall be permitted, at his option, to personally inspect such damage and or test failures.

3. We reserve the option to conduct a site visit to witness any testing and final quality control check out. Therefore, we request that the Engineer be notified of scheduled activities far enough in advance to make arrangements to attend the testing.

4. Manufacturer shall design, manufacture and test all equipment in accordance with these specifications and the applicable sections of the latest revisions or editions of the following:

- a. Institute of Electrical and Electronics Engineers (IEEE)
- b. National Electrical Safety Code (NESC)
- c. American Institute of Steel Construction (AISC)
- d. American Welding Society (AWS)
- e. American Society of Testing and Materials (ASTM)
- f. National Electrical Manufacturers Association (NEMA)
- g. American National Standards Institute (ANSI)

VI. SPECIFICATIONS

TRANSMISSION CIRCUIT BREAKER

A. GENERAL CHARACTERISTICS

1. General purpose, dead tank, transmission breaker for outdoor, three phase applications, with SF6 gas interrupters. Application will be for switching station and circuit protection.
2. Breaker shall operate in an ambient temperature range of -40 degrees to 120 degrees Fahrenheit and withstand 100 MPH wind loading.
3. Breaker shall be furnished for operation on the following system parameters:

a. nominal line-to-line voltage, RMS:	69KV
b. number of phases:	3
c. frequency:	60 hertz
d. system connections:	DELTA

B. ELECTRICAL CHARACTERISTICS

1. Rated maximum voltage, RMS: 72.5KV
2. Withstand test voltage:

a. low frequency, RMS:	160KV
b. full wave impulse (BIL), RMS:	350KV
3. Rated continuous current, RMS: 3,000 amps
4. Rated short-circuit current at maximum voltage, RMS: 40,000 amps
5. Maximum symmetrical interrupting capability: 40,000 amps
 Asymmetrical interrupting capability: 48,000 amps
6. Closing and latching capability, RMS: 50,000 amps
7. Rated interrupting time: 3 CYCLES MAX
8. Rated voltage range factor, K: 1.0
9. Breaker closing shall be a smooth uniform pressure operation and be completed within approximately a fifteen(15) cycle time frame.

C. MECHANICAL CHARACTERISTICS

1. Breaker type is three pole for outdoor use and overhead configuration.
2. Fabricated of steel and finished with a corrosion-resistant paint as follows:
 - a. apply one primer coat
 - b. apply at least one finish coat for a total uniform paint thickness of 3 mils minimum on all exterior metal surfaces.
 - c. finish coat color to be : ANSI NO. 70 SKY GRAY
 - d. provide sufficient touch-up paint identical to the final coat to repair normal scratches and nicks experienced during shipping and installation.
3. Provide for height adjustment of breaker.
4. Provide lifting eyes of sufficient strength to lift breaker.
5. Unit is to be completely assembled and tested prior to shipment.
6. Cabinet doors shall be weatherproof and include provisions for padlocking.
7. Provide opening in base of cabinet with removable cover for conduit entrance.
8. Provide GE type EB terminal blocks (or approved equal) as required. Include 20% spare terminal blocks, to be mounted inside the control cabinet at least 6" above the cabinet base.
9. Install a thermostatically controlled 240vac fused space heater inside the cabinet.
10. Include one set of assembly and maintenance tools with manual closing tool as required.
11. Provide visual indicators for breaker open and close status, and closed spring position.
12. Provide two(2) grounding pads, one on each side of breaker, with (2) 0.500"-13 tapped holes.
13. Breaker to be of the SP type dead tank design with three cylindrical aluminum interrupting modules mounted on top of the mechanism and control cabinet.

D. OPERATING MECHANISM AND AUXILIARIES

1. The operating mechanism shall be a mechanically and electrically trip-free compressed spring mechanism. One interrupter per phase.
2. Closing Mechanism:
 - a. Closing coil volts: 125VDC
 - b. Motor compressed spring
 - c. operating range: 90 - 140 VDC
3. Tripping Mechanism:
 - a. Trip coil: 125VDC Shunt
 - b. operating range 70 - 140 VDC
4. Operating mechanism shall be field replaceable and removable without disturbing other parts of the breaker.
5. 120/240 VAC single phase power will be available.
6. Provide an operations counter
7. Operating connection in accordance with ANSI C37.11-1979.
8. Control wiring to be a minimum of 14 awg stranded copper. Label all wiring.
9. Provide for a travel recorder connection and a position indicator.
10. Provide an external manual pull to trip handle.

E. BUSHING CURRENT TRANSFORMERS

1. Provide five(5) lead multi-ratio current transformers.
2. Two(2) CTs to be installed on each load side bushing and two(2) CTs to be installed on each source side bushing, for a total of twelve(12) bushing current transformers.
3. CT rating 3000/5 amp
4. CTs are to be ANSI accuracy class C400.
5. Terminate all CT leads on short circuit type terminal blocks located inside the control cabinet.
6. Provide the following data for each CT:

- a. ANSI excitation curve
- b. resistance of secondary and connecting leads for each ratio
- c. actual current ratio and turns ratio for each tap
- d. mechanical and thermal short-term ratings
- e. typical ratio correction factor curves for each ratio

F. BUSHINGS

1. Bushings shall be of porcelain material.
2. Bushings shall be of ANSI light gray in color.
3. Bushing terminals to be equipped with a NEMA 4-hole pad for conductor sizes: 500 mcm copper thru 750 mcm copper.
4. Provide ANSI standard creepage ratings.

G. TESTS

1. Tests shall conform to those outlined in section G of General Conditions.
2. Special testing or tests are not requested in this specification.

H. SPECIAL CONDITIONS AND REQUIREMENTS

1. Provide auxiliary switch adjustable contacts five(5) N.O. and five(5) N.C. in addition to those normally required for breaker operation.
2. Wire all contacts to the terminal blocks and label each.
3. Provide auxiliary relay contacts for loss of AC power and loss of DC power to be used as a status signal.
4. Provide indicator for loss of gas with alarm contacts. Note if this item is to be included as an adder to the basic breaker cost.

VII. BID

69KV BREAKERS

ITEM #	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL PRICE
1	1	69KV Breaker meeting Specifications on pages 11-14 MANUFACTURER _____		
		GRAND TOTAL		

GRAND TOTAL \$ _____

DELIVERY TIME: _____

SIGNED BY: _____

FIRM: _____

ADDRESS: _____

TELEPHONE NUMBER: () _____

FAX NUMBER: () _____

E-MAIL ADDRESS: _____

DATE: _____

"NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATION OF NONSEGREGATED FACILITIES"

"A certification of Nonsegregated Facilities, as required by the May 9, 1967 order on Elimination of Segregated Facilities, by the Secretary of Labor (32 Fed. Reg. 7439, May 19, 1967) must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification for all subcontractors during a period (i.e., quarterly, semi-annually, or annually).

(Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.)"

C. Do you have at each of your facilities a current written Affirmative Action Compliance Program as required by Title 41 of the Code of Federal Regulations (CFR) 60-1.40; and current written Affirmative Action Programs for disabled veteran, veterans of the Vietnam Era and Handicapped workers as required by CFR 60-250.4 and CFR 60-741.4?

YES

NO

If "NO" within 120 days after receipt of any order resulting from attached quotation, the undersigned firm agrees to develop and maintain written Affirmative Action Compliance Programs as required. (Current law requires the contractor to develop a written Affirmative Action Compliance Programs in those cases where the contractor has received prime contract or subcontracts for \$50,000 or more and employs fifty (50) or more people).

CONTRACTOR (SELLER/SUPPLIER): _____

MAILING ADDRESS / PHONE: _____

Authorized Representative's
NAME (PRINT OR TYPE): _____

Authorized Representative TITLE: _____

Dated Signature of Authorized Representative: _____

If you received this as part of an Invitation to Bid please return with your BID.

OTHERWISE

Please return to: Personnel Officer/EEO Coordinator
Frankfort Electric and Water Plant Board
P.O. BOX 308
Frankfort, KY 40602

IX. NOTICE TO PROSPECTIVE CONTRACTORS OF REQUIREMENT OF GENERAL SAFETY PROGRAM

The Frankfort Plant Board requires that all contractors operate in compliance with standards set forth by federal, state, and local regulatory agencies, including but not limited to the Occupational Safety and Health Administration, Environmental Protection Agency and Department of Transportation. To comply with the regulations set forth by these agencies it is necessary for each contractor to operate under an established safety program pertaining to the contractor's specific line of business.

The primary goal of a safety program is to protect the health and safety of employees and the public. Our goals are also to conserve and protect property and the environment. **IT IS OUR ABSOLUTE CONVICTION THAT:**

- This is a moral responsibility of each firm and worker involved.
- Safe and healthful work is more efficient, effective and inseparable from how we perform our work.
- Accidents and injuries are unnecessary costs

We accomplish work which is free from accident and injury by providing vigorous leadership that is visible through the organization.

How well we conduct our work in a hazard-free manner, according to the direction provided, is a key factor in our performance for which we are each accountable.

There are certain basic elements that are incorporated into the safety program:

- Effective management leadership from each contractor;
- Organization of a **General Safety Program**;
- On-site supervisor with authority to carry out their responsibilities including suspension of work to correct unsafe conditions;
- Proper training and supervision; and
- Employee participation

Does your organization operate under an established safety program that is in compliance with all applicable federal, state and local regulations and does this program embody the philosophies described above?

YES

NO

CONTRACTOR (SELLER/SUPPLIER): _____

MAILING ADDRESS / PHONE: _____

Authorized Representative's
NAME (PRINT OR TYPE): _____

Authorized Representative TITLE: _____

Dated Signature of Authorized Representative: _____

If you received this as part of an Invitation to Bid, please return with your bid.

OTHERWISE

Please return to: Safety Officer
 Frankfort Electric and Water Plant Board
 P.O. Box 308
 Frankfort, KY 40602

*Frankfort Electric and Water Plant Board
PO Box 308, Frankfort KY 40602*

X. DRUGFREE WORKPLACE COMPLIANCE CERTIFICATE

PLEASE SIGN BELOW TO INDICATE: 1) Contractor is in compliance with any applicable local, state or federal laws concerning mandatory Drug and Alcohol Testing Programs; and 2) AS a term of any contract, the Contractor agrees to comply with any such drug and/or alcohol testing that may be required by law.

CONTRACTOR : _____
MAILING ADDRESS/PHONE: _____

Authorized Representative's
NAME (Print or Type): _____
Authorized Representative's TITLE: _____
SIGNATURE & DATE: _____

**If you received this as part of an Invitation to Bid please Return with your BID;
Otherwise, Return to: Personnel/Safety Officers, PO Box 308, Frankfort KY 40602**

**DRUGFREE WORKPLACE COMPLIANCE
CERTIFICATE**