INVITATION FOR BID

PWC2526025
TWO (2) 230KV SF6 GAS BREAKERS FOR POD5

Date of Issue: October 1, 2025
Date of Opening Date: November 4, 2025
1:00 P.M.

Direct all inquiries concerning this IFB to:

JoAnn Bowman
Procurement Advisor
procurement@faypwc.com

Contents

ADVERTISEMENT FOR BID
FAYETTEVILLE PUBLIC WORKS COMMISSION
TWO (2) 230KV SF6 GAS BREAKERS FOR POD5

Cumberland County
North Carolina

Pursuant to N.C.G.S 143-129, sealed Bids are solicited and will be received at Fayetteville Public Works Commission, Administration Building, Procurement Department/Conference Room 107, 955 Old Wilmington Road, Fayetteville, NC 28301, until **1:00 p.m., EST Thursday, November 4, 2025** , for the **PWC2526025 TWO (2) 230KV SF6 GAS BREAKERS FOR POD5.**

The Commission is requesting firm quotations for Two (2) 230KV SF6 Gas Breakers for POD 5 as specified in this document, to support the operations of the Electric Support Services Department.

Enclosed are the Instructions to Bidders, Technical Specifications, and Bid Pricing Form. Bidders must submit the completed Bid Pricing Form, References, Attachment B, Attachment C. Submissions must be made using the provided forms or exact copies thereof, as specified in the bid documents. Unsolicited bid samples or descriptive literature may not be examined or tested, will not be used to determine responsiveness, and will not be deemed to vary any of the provisions of the IFB. Failure to comply with these requirements shall constitute sufficient cause to reject a bid without further consideration.

Questions regarding this bid must be submitted in writing to the attention of **JoAnn Bowman**, at procurement@faypwc.com no later than **5:00 p.m., EST Thursday, October 16, 2025**, in order to be considered for a response.

Mailed bids must be addressed to **JoAnn Bowman**, Procurement Advisor, Fayetteville Public Works Commission, 955 Old Wilmington Road, Fayetteville, North Carolina 28301. The outside of the envelope must be marked **IFB: PWC2526025 TWO (2) 230KV SF6 GAS BREAKERS FOR POD5** and shall indicate the name, and address of the bidder. Email bids to procurement@faypwc.com with the bid title and number in the subject line "**IFB: PWC2526025 TWO (2) 230KV SF6 GAS BREAKERS FOR POD5"**. Late bids will not be considered.

Fayetteville Public Works Commission reserves the right to accept or reject any or all bids, to waive minor informalities or technicalities as permitted by law, to disregard nonconforming or nonresponsive bids, and to re-advertise for bids if deemed in the best interest of PWC. The bid tabulation and announcement of the apparent low bidder at the bid opening do not constitute a binding contract with PWC. No contract will be considered awarded until a formal written Agreement is executed by both PWC and the successful bidder. The award of a contract, if made, will be to the lowest responsible, responsive bidder whose qualifications indicate the award will be in the best interest of PWC.

FAYETTEVILLE PUBLIC WORKS COMMISSION
Nikole Bohannon
Procurement Manager

INSTRUCTIONS TO BIDDERS
FAYETTEVILLE PUBLIC WORKS COMMISSION
PWC2526025 TWO (2) 230KV SF6 GAS BREAKERS FOR POD5

SCOPE

The Commission is requesting firm bids for the purchase of 230 kV SF6 gas power circuit breakers for POD 5, as specified in the Bid Documents. The work shall include furnishing all equipment and materials as outlined in the specifications. These breakers will support the operations of the Electric Support Services Department.

OBJECTIVE OF THE REQUEST

It is the intent of this bid invitation to obtain pricing for **PWC2526025 TWO (2) 230KV SF6 GAS BREAKERS FOR POD5** within the technical specifications section of this Invitation for Bid (IFB). You are requested to submit your bid on the enclosed Bid Pricing Form.

IFB SCHEDULE

The following table shows the schedule of events to prepare your organization's response. The key deadlines and targeted dates for this process are as follows:

Action	Responsibility	Date/Time
Submit Written Questions	Bidders	Thursday, October 16, 2025, 5:00 pm
Provide Response to Questions	PWC	Tuesday, October 21, 2025, 5:00 pm
Submit IFB	Bidders	Thursday, November 4, 2025, 1:00 pm
Target Commission Date	PWC	Wednesday, December 10, 2025
Target Council Date	PWC	Monday, January 12, 2026
Award /Sale of Goods Agreement	PWC	January 2026
Preferred Delivery	Awarded Bidder	Thursday, June 15, 2028

QUESTIONS

Written questions shall be e-mailed to procurement@faypwc.com by the date and time specified in the IFB schedule. Bidders will enter "IFB **PWC2526025** – Questions" as the subject of the email.

Questions received prior to the submission deadline date, the Procurement Advisor's response, and any additional information deemed necessary by PWC will be posted in the form of an addendum to the PWC website and shall become an Addendum to this IFB. No information, instruction, or advice provided orally or informally by any PWC personnel, whether made in response to a question or otherwise concerning this IFB, shall be considered authoritative or binding. Firms shall rely only on written material contained in an Addendum to this IFB.

Inquiries should be submitted no later than the date and time noted in the IFB schedule. Questions answered verbally will be followed up by written addenda as deemed necessary; oral interpretations shall have no effect.

REFERENCES

Bidders shall provide at least three (3) different references for which your company has supplied the exact model of equipment offered. PWC may contact these references to determine the commodity provided are substantially similar in scope to those requested in Attachment A and that the bidder's performance has been satisfactory. The information obtained shall be considered in the evaluation of the bid. If PWC is referenced, it cannot be counted towards your three (3) required references but may be included in addition to.

COMPANY NAME	CONTACT NAME	TELEPHONE NUMBER	EMAIL
Fayetteville Public Works Commission, if applicable			

VENDOR REGISTRATION VIA ISUPPLIER

1) All vendors interested in doing business with PWC must register as a vendor through the iSupplier Portal via https://www.faypwc.com/purchasing.The iSupplier self-service portal enables vendors to have real-time access to information regarding purchase orders, invoices, and payments through a secure environment. Attach a copy of your W9 to your online registration.

BID DEPOSIT

1) Each bid shall be accompanied by a cashier's check or certified check drawn on a bank insured by the Federal Deposit Insurance Corporation or Savings Association Insurance Fund. Checks shall be payable to Fayetteville Public Works Commission, Fayetteville, North Carolina, in an amount not less than five percent (5%) of the total bid as a guarantee that a Contract, if awarded, will be entered into. In lieu thereof, a bid bond may be submitted by the bidder.

2) Bid bond shall be conditioned that the surety will, upon demand, forthwith make payment to the Obligee upon said bond if the bidder fails to execute the Agreement in accordance with the bid bond, and that upon failure to forthwith make payment, the Surety shall pay to the Obligee an amount equal to double the amount of said bond.

3) Only one (1) bid bond is required, the amount of which shall be based on the total amount of the bid. The value for the bid bond shall be based on the bid schedule of the maximum total amount.

SUBMISSION INSTRUCTIONS

1) Bids should be complete and carefully worded and should convey all the information requested in the IFB. Bids should be prepared simply and economically, providing a

straightforward, concise description of the bidder's capabilities to satisfy the requirements of the IFB. Emphasis should be on completeness and clarity of content. If the bid includes any comment over and above the specific information requested in the IFB, the bidder should include this information as a separate appendix to its bid. Bids that include clarifications or modifications to any of the IFB's contractual requirements, or a bidder's standard terms and conditions, may be deemed non-responsive and not considered for award at PWC's discretion.

2) Unsolicited bid samples or descriptive literature may not be examined or tested, will not be used to determine responsiveness, and will not be deemed to vary any of the provisions of the IFB. Failure to comply with these requirements shall constitute sufficient cause to reject a bid without further consideration. PWC reserves the right to accept or reject any or all bids, to waive minor informalities or technicalities as permitted by law, to disregard nonconforming or nonresponsive bids, and to re-advertise for bids if deemed in the best interest of PWC. The bid tabulation and announcement of the apparent low bidder at the bid opening do not constitute a binding contract with PWC. No contract will be considered awarded until a formal written Agreement is executed by both PWC and the successful bidder. The award of a contract, if made, will be to the lowest responsible, responsive bidder whose qualifications indicate the award will be in the best interest of PWC.

3) Bids may be withdrawn by the bidder only in writing and if receipt of such withdrawal is acknowledged by PWC prior to the time for the bid submittal deadline identified in the Advertisement for Bidders (or such later date included in an Addendum). Written withdrawal requests shall be submitted on the bidder's letterhead and signed by an official of the bidder duly authorized to make such request. Any withdrawal request made after the bid submittal deadline shall be allowed only if the price bid was based upon a mistake that constituted a substantial error, provided the bid was submitted in good faith, and then only pursuant to the terms of N.C.G.S. § 143-129.1.

4) Bids must be submitted in an envelope clearly marked with "**IFB: PWC2526025 TWO (2) 230KV SF6 GAS BREAKERS FOR POD5"** along with the bidder's name and address. **Even if this envelope is placed inside a courier's envelope, the courier envelope itself must also be properly marked to ensure the bid can be identified without opening it.** This is critical for proper sorting and handling, as multiple bids are received daily for different Procurement Advisors. Any bid received without proper labeling on the courier envelope will be returned to the sender and will not be considered for award. All bids must be delivered to the Fayetteville Public Works Commission, Administration Building, Procurement Department, at 955 Old Wilmington Road, Fayetteville, NC 28301, by the specified deadline Late bids will not be considered.

5) Bids will be examined promptly after the due date and an award will be made at the earliest possible date. Bids must be held firm for PWC for a period of sixty (60) days after the bid due date. A purchase order will be issued to the awarded bidder.

6) Bidders shall submit bids only on the Bid Pricing Forms provided herein, or exact copies thereof **(See Attachment B – Bid Pricing Form)**. Failure to provide full and complete Bid Pricing Forms using the form provided herein will result in a bid being deemed non-responsive.

7) All bids must be signed by an authorized official of the bidder. Bids may be rejected for any omission, alteration of form, additions not called for, conditional bid, or any irregularities of

any kind.

8) Do not submit alternate bids unless specifically called for on the Bid Pricing Forms.

PRICING

1) All bidders are advised to include all costs incurred by the bidder in delivering the **230KV SF6 Gas Breakers for POD5** to the PWC Warehouse 1097 Public Works Drive in their bid submittal. The invoice submitted for payment shall not reflect any other costs (fuel surcharge, toll, etc.). PWC is not tax-exempt.

EVALUATION AND AWARD

1) An award of a contract is subject to the approval by the Board of Commissioners of PWC and the Fayetteville, North Carolina City Council.

2) PWC reserves the right to inspect, at a reasonable time, the equipment, item, plant, or other facilities of a prospective Bidder prior to award, and during the Sale of Goods Agreement term, as PWC deems necessary to determine that such equipment, item, plant, or other facilities conform with the specifications/requirements and are adequate and suitable for the proper and effective performance of the Sale of Goods Agreement.

3) PWC reserves the right to request additional information from bidders to aid in the evaluation process. This information may include but is not limited to, financial statements, a reference list of contracts of similar size, etc.

4) PWC reserves the right to make a single award for all items or may award separate contracts to multiple bidders for various items to the lowest responsive, responsible bidder or bidders, taking into consideration product quality, performance to PWC, and conformity with the specifications in these bid documents. PWC may also consider, among other things, the Bidder's past performance conduct on other contracts, and other information as PWC deems necessary to assist in the evaluation of any bid.

The Sale of Goods Agreement will be awarded for a period of one (1) year to begin on or about January 30, 2026.

5) The successful bidder shall not assign, transfer, or convey any part of the agreement, including rights or obligations, to a third party without obtaining prior written approval from PWC. This includes the assignment of payments that may become due under the agreement. Any unauthorized assignment may result in disqualification or termination of the agreement. Approved assignments do not relieve the successful bidder of their responsibilities under the terms of the agreement unless explicitly stated in writing by PWC.

6) The successful bidder must promptly notify PWC in writing of any legal actions, investigations, or issues arising during the agreement period that may impact their ability to perform their obligations under the agreement. Failure to provide timely notification may result in termination of the agreement. As outlined in Attachment C: Certification of Primary Participant Regarding Debarment, Suspension, and Other Responsibility Matters, the successful bidder must also certify that no such legal impediments exist at the time of bid submission. If circumstances change after submission or during the agreement period, the bidder is required

to immediately inform PWC, providing full details of the situation.

DELIVERY AND PAYMENT

1) Delivery to be made F.O.B. Public Works Commission 1097 Public Works Drive, Fayetteville NC 28301.

2) Deliveries shall be made between the hours of **9:00 a.m. and 3:00 p.m., Monday through Friday**, within the time frame specified on the Bid Pricing Form.

3) Payment for equipment, material, supplies, etc. purchased pursuant to this bid shall be made by Public Works Commission approximately thirty days after the same has been delivered, inspected, approved and the invoice received in the PWC Accounts Payable Office, P.O. Box 1089, Fayetteville, North Carolina 28302.

4) Reference Attachment A Section 5.0, for additional details regarding the shipping expectations of the power circuit breakers.

FAYETTEVILLE PUBLIC WORKS COMMISSION
TWO GANG OPERATED 245kV 3,000 AMP CIRCUIT BREAKERS FOR POD NO. 5

ATTACHMENT A: TECHNICAL SPECIFICATIONS

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FAYETTEVILLE PUBLIC WORKS COMMISSION
TWO GANG OPERATED 245kV 3,000 AMP CIRCUIT BREAKERS FOR POD NO. 5

TECHNICAL SPECIFICATIONS

1.0 Scope

1.1 Reference the IFB Instruction to Bidders Scope section.

2.0 General Requirements

2.1 All materials and equipment shall be new.

2.2 The Technical Specifications describe the type, size, and characteristics of the various materials and equipment required to be furnished. The Drawings indicate general arrangement, equipment location, and spacing.

2.3 Strict adherence to the Technical Specifications and Drawings is requested to facilitate checking and consideration of the Bid.

2.4 Bids shall include the following:

2.4.1 Catalog numbers, manufacturer, ratings, characteristics, types, sizes, etc., of all major removable materials and equipment included. A simple statement that all necessary materials and equipment will be provided is not satisfactory.

2.4.2 Performance data for the several items as set forth in the Technical Specifications.

2.4.3 The Bidder shall state in his Bid the manner in which the breaker will be shipped. Units shall be shipped with bushings installed.

2.4.4 Prices shall include the cost of delivery to the substation site with unloading performed by PWC, in accordance with the Instructions to Bidders.

2.4.5 It is the intent of these Specifications that the breaker shall be complete and fully operable. Any details not mentioned in the Specifications but required for satisfactory operation shall be furnished and installed by the Bidder.

2.4.5. Station power available at PWC's substation will be 240/120 volts, 60 Hz, single-phase. The control DC voltage at the substation will be 125 volts. The equipment on the breaker shall coordinate with these voltages as appropriate.

2.5 Defective Materials, Equipment, and Workmanship

2.5.1 All materials and equipment furnished hereunder shall be subject to the inspection, tests, and approval of PWC, and the Bidder shall furnish all information required concerning the nature or source of any materials and equipment and provide adequate facilities for testing and inspecting the materials and equipment at the plant of the Bidder.

2.5.2 The materials and equipment furnished hereunder shall become the property of PWC when delivered at the point to which shipment is to be made, provided, however, that PWC may reject any such materials and equipment that do not comply with the Specifications and warranties of the Bidder and manufacturers. Recognition and subsequent rejection of any defective materials and equipment may occur either before or after incorporation of such materials and equipment into the facilities, provided such rejection is made within one year of the date of energization of the materials and equipment. Upon any such rejection, the Bidder shall replace the rejected materials and equipment with materials and equipment complying with the Specifications and warranties, F.O.B. truck at a suitable destination as determined by PWC. PWC shall return the rejected materials F.O.B. truck at the same destination. In the event of the failure of the Bidder to so replace rejected materials and equipment, PWC may make such replacement, and the cost and expense thereof shall be paid by and recoverable from the Bidder.

2.5.3 The breaker to be provided herein shall include a full warranty on each complete breaker together with all parts. This warranty shall extend for not less than sixty (60) months.

3.0 Standards

3.1 All Equipment and Materials covered by these Specifications and all tests applied thereto shall, unless otherwise stated herein, be in accordance with the applicable provisions of the latest editions of the Standards of the ASTM, ANSI, AEIC, IEEE, NEMA, NESC, and OSHA. Breaker must also meet or exceed the ASME Boiler and Pressure Vessel Code, as applicable.

Where the term "Standards" is used in the Specifications, it shall be understood to refer to the above Standards.

4.0 Drawings and Documentation

4.1 Approval Drawings

4.1.1 Before proceeding with fabrication, the manufacturer shall submit for approval to PWC sufficient Drawings to demonstrate that all parts conform to the requirements and intent of these Specifications. The Drawings shall include four (4) copies each of Breaker, Operator, and Current Transformer (CT) Nameplates, Breaker and Bushing Outlines, Elementary and

Connection (Control Wiring) Diagrams, and CT Secondary Exciting Curves and Ratio Correction Factor Curves. All Drawings submitted shall be a minimum of a "C" (17" x 22") size print. Submittal of Drawings smaller than "C" size will be immediately returned stamped "not approved," and a proper-sized Drawing will have to be submitted. All Drawings shall be dimensioned in feet and inches; metric measurements alone will not be acceptable. However, dual dimensioning in feet and inches and centimeters will be acceptable.

4.1.2 The Outline Drawing shall show dimensions of equipment, including bushings, base anchor dimensions, conduit entrance panel location, and all other important external features. These Drawings shall show weights, vertical and horizontal dimensions, bushing catalog numbers, and ampere ratings, description of top bushing terminals, and arrangement of all external accessory devices, as well as the complete breaker rating. Cut sheets and catalog descriptive bulletins shall be submitted for any components of the breaker, along with the Drawings for review.

4.1.3 Approval Drawings shall be submitted directly to Joel Valley, Director of Substations & Electric Support Services, 1094 Commission Drive, Fayetteville, NC 28302.

4.1.4 Approval of Drawings shall not be held to relieve the Bidder of obligations to meet all requirements of the Specifications, of responsibility for correctness of the Drawings, or of responsibility to meet the original shipping promise on the basis of PWC being allowed two (2) weeks for approval.

4.1.5 PWC may require a second submittal of Shop Drawings if, in the opinion of PWC, such is required due to the extent of changes required on the first submittal. If an extension of time is required due to a protracted drawing approval process, the price will remain as quoted for the quoted delivery.

4.1.6 All drawings shall have marked on each sheet or group of sheets that always remain together, a label that shall read “PUBLIC WORKS COMMISSION, FAYETTEVILLE, NORTH CAROLINA”

4.1.7 The manufacturer shall submit with the preliminary Drawings all information needed to design an adequate foundation for the breaker, including the exact positioning and size of anchor bolts.

4.2 Final Drawings

Contingent upon Approval Drawing review, and product manufacture, the Bidder shall issue final documentation as follows:

4.2.1 One (1) complete set of all Drawings revised to “as-built” status, released on paper.

4.2.2 Three (3) complete sets of all Drawings, revised to "as-built" status, released on three (3) separate USB drives, compatible with AutoCad 2021. Product manuals, leaflets, CT curves, etc. shall be provided on the same USB (if there is room) in Adobe (.pdf) format. USBs shall contain .pdf copies of certified test reports as well.

4.2.3 Four (4) copies of applicable instruction books, including one (1) print of each of all Drawings representing physical and electric details as furnished per paragraphs 4.2.5.

4.2.4 Two (2) copies of certified test reports corresponding to functional performance measurements after final assembly.

4.2.5 All Drawings are to be certified correct and supplied within a reasonable length of time prior to shipment of the equipment. Each set of Drawings and documentation shall include the following information:

a. Outline and Assembly Drawings showing size and location of major components and all principal dimensions.
b. Control and relay panel front view.
c. Details of bushing and bushing terminal connectors.
d. Diagram of bushing current transformers, connection, number of Turns, polarity marking, ratios, and bushing orientation.
e. Current transformer performance characteristic curves and data for all relay accuracy CTs.
f. Details of control housing.
g. Panel connection diagram showing the exact connection for all components furnished.
h. AC and DC elementary circuit diagrams for all relay and control equipment furnished.
i. Wiring control and schematic diagrams.
j. Instruction books.
k. Renewal parts catalog.
l. Two (2) copies of certified test reports.

5.0 Shipping of Power Circuit Breakers

5.1 PWC would prefer that the Power Circuit Breakers be shipped to the PWC warehouse yard at 1097 Public Works Drive, with unloading by PWC. If the Bidder is unable to meet the delivery schedule, then the Bidder may submit alternate dates of

delivery that are subject to approval by PWC. Assembly of any component parts removed for shipment and field testing of the unit will be performed by the Bidder under the supervision of the manufacturer's Field Service Engineer.

5.2 Units are to be shipped utilizing a canvas-covered, open-top truck to facilitate unloading with a crane or derrick truck. Units are to be shipped direct from the manufacturing site, with no intermediate transfers. Shipping with the manufacturer's own trucks is preferred.

5.3 Before shipment, each breaker shall be completely assembled to determine if all parts fit properly. Parts removed for shipment shall be marked to permit easy identification when reassembling.

5.4 Method of packing and loading shall ensure protection of all parts from dampness, corrosion, breakage, or vibration injury that might reasonably be encountered in transportation, storage, and handling.

5.5 Release for shipment is to be granted by either PWC or PWC's Engineer based upon the manufacturer's compliance with the following:

5.5.1 Furnishing of the requisite number of copies of the Final Drawings as called for in the Specifications.

5.5.2 Thirty (30) days' notification of tentative shipping schedule and forty-eight (48) hours' notification before delivery.

5.5.3 Fourteen (14) consecutive days prior notification of tests, so PWC may have a representative present for witness of the tests.

6.0 Manufacturer's Field Representative

6.1 The manufacturer shall provide the services of a Field Service Engineer as part of the bid price for Schedule No. 1 and Schedule No. 2 for a period of one (1) day per breaker. Additional time required shall be provided at the per-day rate quoted in the Successful Bidder's Bid Submittal. This same rate shall apply as a deduction for time included in the base bid that is not actually used.

6.2 Services provided by the Field Engineer shall include all pre-service inspection procedures outlined in the manufacturer's literature, breaker inspection before unloading at the site or as requested by PWC, supervision of installation of component parts, including bushings, filling the breaker with SF6 gas, and testing of the breaker operations and controls. The Field Service Engineer shall give approval for energizing the breaker. The Field Service Engineer shall also provide training to PWC's maintenance personnel during checkout of the breaker.

6.2 The Field Service Engineer shall also perform a series of tests, including high potential testing of interrupters, breaker mechanism travel, synchronization of group

operation, current transformer ratio tests, and current polarity tests. The manufacturer shall be responsible for providing an estimate of the amount of field service time required to perform the requested duties.

7.0 Power Circuit Breaker Rating

7.1 General

7.1.1 The power circuit breakers shall be suitable for outdoor operation and shall be dead tank, three (3) poles, gang operated, and single throw. The breaker shall consist of an outdoor dead tank, frame-mounted power circuit breaker having a weatherproof mechanism, and a relay cabinet with a hinged panel containing the control wiring. Breaker shall be rated as follows:

7.1.2 Two (2) SF_6 Gang Operated Circuit Breakers, rated 245 kV, 3,000 amperes continuous current carrying capacity at 60 Hertz with a minimum of 63,000 amps symmetrical interrupting rating and furnished with specified accessories.

Max. Rated Voltage KV, rms	Rated Continuous Current @ 60 Hz Amperes, rms	Rated Interrupting Time Cycles	Max. Sym. Interrupting Capability and Rated Short-Time Current kA, rms	Closing and Latching Capability kA, rms
245	3,000	3	63	104

7.2 Seismic Criterion

7.2.1 The breakers shall be designed to withstand seismic events for the applicable seismic zone according to the Uniform Building Code to the extent that a force applied in the direction of least resistance to that loading will not cause the breaker tank(s), cover, frame, bushings, control cabinet, contact assembly, or fastenings to be overstressed.

7.3 Ambient Temperature and Humidity

7.3.1. The breaker shall be suitable for operation at an ambient temperature of -30°C (-22°F). The maximum ambient temperature rating shall be 50°C (122°F). Humidity rating shall be up to 100 percent.

7.4. Altitude

7.4.1 The breaker will be installed at an altitude below 3,300 feet.

7.5 Wind and Ice Loading

7.5.1 The breakers shall be designed to withstand wind and ice loading for the NESC heavy loading district, using the extreme wind with no ice loading criteria, utilizing the governing loading case.

7.6 Assembly

7.6.1 The proposed equipment shall be completely assembled, wired, adjusted, and tested at the factory before shipment.

7.6.2 Schedule No. 1 and No. 2 breakers shall be designed so that no SF6 seals will have to be made in the field. However, it shall be permissible for the breaker to be brought up to final pressure in the field by use of an SF6 gas cylinder furnished by the Bidder.

7.7 Rating

7.7.1 The units shall be rated 230 kV nominal, 245 kV maximum, 3,000 amperes continuous, 900 kV BIL (Schedule No. 1 and No. 2) capable of energizing or de-energizing 230 kV transmission lines without prestrike or restrike.

7.8 Dielectric Requirements

7.8.1 The completely assembled breaker, including porcelain, current transformers, and all other appurtenances, shall be designed and tested to withstand the voltages tabulated below. The breaker shall be able to withstand tabulated values without puncture or flashover with contacts either closed or fully open:

Item	**Voltages**
Full Wave BIL, kV rms	900 kV
60 Hertz 10-second withstand, kV rms wet	350 kV
60 Hertz 1-minute withstand, kV rms dry	425 kV
Two (2) microsecond chopped wave impulse crest	1,160 kV

Max. Rated Voltage KV, rms	**Low Frequency 1 Minute Dry rms KV**	**Low Frequency 10 Second Wet rms KV**	**Full Wave BIL: kV, Crest**	**Interrupter BIL kV, Crest**	**Minimum Creepage Distance of External Insulation to Ground, Inches**
245	425	350	900	N/A	140

7.9 Interrupting

7.9.1 The breaker shall have standard interrupting capacities as listed in the Proposal section for each schedule, and in paragraph 8.1. The breaker shall interrupt the arc within three cycles or less (at 60 Hertz) measured from the instant the trip coil is energized with normal voltage. Three-cycle

or less interruption shall be achieved over a range of 25 percent to 100 percent of rated interrupting capacity.

7.9.2 The breaker shall be capable of interrupting the full rated fault current at least twice in succession without intentional delay (OCO).

8.0 Equipment Details

8.1 Applicable Codes and Standards

8.1.1 In addition to the requirements set forth herein, each breaker and auxiliary and accessory equipment furnished shall be designed, manufactured, and tested in accordance with the current issue of the standards of ANSI C37, ASME, NEMA 56 4, NEMA 104, and IEEE. If any conflict arises between the standards of ANSI and NEMA, the standards of ANSI shall govern.

8.2 Construction

8.2.1 The insulation structure of the breaker shall meet the requirements of Section 6 of ANSI C37.12, latest revision.

8.2.2 The structural features of the breaker shall meet the requirements of Section 8 of ANSI C37.12, latest revision, including the rated short-circuit current and seismic events as described in Section 8 of these Specifications.

8.2.3 Original and renewal parts shall be so manufactured that they can be assembled in the field without undo fitting.

8.2.4 The main breaker contacts shall be designed to have adequate thermal and current-carrying capacity for carrying full-rated current without exceeding the allowable temperature rise as specified in ANSI C37. They shall be designed to have long life so that frequent replacement or maintenance will be unnecessary. The surfaces of either or both moving and stationary arcing contacts which are exposed directly to the arc shall be faced with suitable arc-resisting material.

8.2.5 All surfaces of steel parts (framework, tank, etc.) shall be cleaned in accordance with the Bidder's standards to remove dirt, scale, and grease prior to painting. This shall be immediately followed by an application of priming of rust-inhibitive paint and the necessary base coat. All steel surfaces shall have a minimum of 3 mils of paint. Paint finish shall be provided to withstand EEI functional requirements as outlined in the Appendices.

8.2.6 The exterior surfaces of all bolts, nuts, and washers shall be primed and painted as above, or such parts shall be stainless steel or galvanized. No

exposed cadmium-plated parts or zinc chromate-plated parts will be allowed.

8.2.7 Color specification shall be ANSI #70 light gray, meeting the EEI functional requirements included in the Appendices.

8.2.8 All viewing windows for viewing gauges, relays, and indicators shall be Lexan.

8.2.9 One (1) painted or galvanized, welded steel supporting framework with two (2) ground terminals for 4/0 to 500 Kcmil copper grounding cable shall be provided. The connections are to be located on diagonally opposite corners at the bottom of the frame with NEMA 2-hole (one and three-fourths inch (1-3/4") spacing) and mounted with one-half inch (1/2") - 13 NC thread bolts. Framework shall be equipped to support exposed live parts to a height of at least fifteen (15) feet above grade for Schedule No. 1.

8.2.10 Bidder shall provide six (6) bushings or enclosures, standard creepage, with external terminals including flat spade connections with NEMA four-hole drilling either built in or furnished separately. The bushings shall be rated to match the full capacity of the breaker. The terminal connectors shall be rated for the bushing's continuous current capacity.

8.2.11 Bushings or enclosures shall be light gray, constructed of high-strength wet-process porcelain, and rated at circuit breakers Full-Wave withstand BIL.

8.2.12 All metal cabinets attached to the breaker shall be solidly grounded to the breaker frame.

8.2.13 The circuit breakers shall be completely assembled, wired, adjusted, and tested at the factory before shipment.

8.2.14 The breakers shall be designed so that no gas-handling service trailer or gas-recovery facilities are required, and so that no SF6 seals will have to be made in the field. However, it shall be permissible for the breaker to be brought up to final pressure in the field by use of a gas cylinder furnished by the Bidder.

8.3 Operating Mechanisms

8.3.1 The operating mechanisms shall consist of a high-speed electrically trip-free and mechanically trip-free pneumatic, hydraulic, pneuhydraulic, or charged spring-operated device. The mechanism shall operate to open the three phases of the breaker simultaneously. The operating mechanism shall not permit tripping from any position except fully closed. In the event that any pole of the breaker fails to close, the mechanism shall operate to trip all poles. Pneumatic system pressure gauge and window, low-pressure alarm, governor, and cut-out switch shall be furnished.

8.3.2 The stored energy mechanism shall be capable of at least one open-close-open operation without recharging. The time for the motor to recharge the

mechanism shall not exceed ten (10) seconds. The charging motor shall not draw more than twenty (20) amperes during the charging operation.

8.3.3 The breaker shall be equipped for 125-volt DC tripping and closing. Two (2) separate and independent trip coils (or set of coils) shall be furnished so the breaker can be tripped independently from two separate and independent relaying sources. The trip coils and all necessary circuits, including pressure switches and reset devices, shall be provided on the mechanism. Tripping current shall not exceed 20 amperes.

8.3.4 Each tripping circuit shall operate satisfactorily over a voltage range of 60% to 115% of nominal dc voltage. Where more than one trip coil is furnished on each trip for primary relaying and/or back-up relaying, the trip coils associated with the same tripping circuit shall be series-connected. Parallel connection is not acceptable.

8.3.5 Operating mechanism auxiliary switches of the rotary type shall be mechanically coupled to the mechanism providing a positive indication of the position of the main contacts of the breaker. Each operating mechanism shall be equipped with a 20-stage auxiliary switch with ten (10) "a" and ten (10) "b" contacts for customer use only, in addition to those normally required for breaker operation and light indication functions. All spare auxiliary switch contacts and unused contacts on control devices shall be wired to terminal blocks in the control cabinet, even if the contacts are not used.

8.3.6 A Veeder-Root type operation counter, visible from outside of the mechanism housing, shall be provided.

8.3.7 For maintenance purposes, a manual tripping device and a manual closing device shall be provided on the outside of the breaker.

8.3.8 A latch-checking switch shall be provided on the mechanism.

8.3.9 Emergency trip control, mechanically linked to the mechanism trip latch, shall be provided. The manual trip lever shall be externally accessible to operating personnel and, upon operation, shall set an interlock (69) to block electrical closing. The interlock shall be manual reset only.

8.3.10 Mounting facilities for the application of a time travel device and instructions for timing of the breaker shall be furnished with the breaker.

8.3.11 A twelve (12) point annunciator, minimum, shall be provided for alarming all breaker alarms, tripping, or any breaker trouble.

8.4 Gas Insulation and Interruption Systems

8.4.1 The breakers, if closed, shall remain closed and locked and provide an alarm if the air or gas pressure should decrease to the point where the breaker is not capable of a successful operation at rated interrupting capabilities. If open, the breaker shall lock open and provide an alarm. The detection schemes for these air and/or gas pressure conditions shall be fail-safe.

8.4.2 Each breaker shall be provided with a means of maintaining the appropriate dryness and pressure of the dielectric gas.

a. The equipment furnished above, including the air and gas storage systems, shall have ample capacity for a minimum of one open-close-open operation without intentional delay. The Bidder shall state the time required to restore normal pressure. In addition, each breaker shall have the capability of one open-close-open operation after loss of control power before the interlock switch opens to prevent the breaker from closing due to inadequate pressure to ensure interruption of a rated capacity fault.

b. A gas pressure manifold valve assembly shall be provided and shall be easily accessible for routine maintenance checks.

c. EMGLO compressors are not acceptable.

d. Air and gas valves and connections shall be furnished to permit unit servicing as far as practical. Bidder shall verify with the customer before construction.

e. All tubing used for SF6 gas-pressure monitoring and for air pressure from the air compressor discharge outlet to the rest of the air system shall be stainless steel. Copper tubing is not acceptable.

f. A "Twist-Lock" 3-wire outlet rated 50 amperes, 240 volts AC shall be provided for connection of PWC's gas cart.

8.4.3 The gas insulation system shall be provided with a temperature-compensated, gas-monitoring system which provides an alarm circuit, a command signal, and a blocking signal. Each device using SF6 gas under pressure for insulating purposes shall be equipped with dial-type pressure and temperature gauges. Provisions shall be made for remote alarm indication. For breaker pole unit interconnected devices, a centrally located gauge and alarm device shall be provided. Location shall be subject to Commission's approval.

8.5 Mechanism Housing and Cabinet

8.5.1 The mechanism housing and cabinet shall be furnished and mounted on the breaker frame. The centerline of the mechanism housing shall not exceed sixty inches (60") above grade level.

8.5.2 The mechanism housing, cabinet, and cabinet door(s) shall be weatherproof and fabricated of sheet metal of sufficient thickness to prevent warping or buckling. The cabinet door(s) shall be vertically hinged

and arranged to permit ready access to the inside of the cabinet housing. A continuous stainless steel hinge shall be used on cabinet door(s), or sufficient reinforcement of cabinet door(s) must be provided to prevent warping and buckling of the door hinge side. The door shall have a cabinet-type 3-point latching device with a locking device in the closed position and shall include provisions for attaching a padlock with a 3/8-inch shackle diameter to the locking device. All doors shall open wide (135°), giving full access to interiors. The mechanism housing may be in a separate compartment with bolted covers, which can be removed and replaced without undue difficulty.

8.5.3 The cabinet shall be provided with a removable plate in the bottom for conduit entrances (to be drilled by others).

8.5.4 One or more 240-volt AC heaters for continuous operation shall be furnished to prevent moisture condensation in the cabinet and housing. Additional heaters with thermostatic control shall be provided to maintain normal operation of the cabinet and housing at an air temperature of -30°C (-22°F). All heaters shall be equipped with guards, and the 240-volt electric terminals of the heaters shall also be covered.

8.5.5 A holder shall be furnished and mounted on the inside of the cabinet to store the Final Drawings and instruction book.

8.5.6 Convenience 120-volt GFCI receptacles and lamps shall be provided in the main cabinets, complete with fuses or equivalent. Light shall have an on/off manual switch plus a door switch and shall be protected by a guard.

8.5.7 The control panel shall be dead front with all switches, breakers, etc., enclosed.

8.6 Wiring

8.6.1 All power wiring shall be made with #10 AWG tinned copper wire or larger-sized wire. The primary insulation jacket of all wiring shall be 600-volt, 90°C, and water, oil, and flame resistant. Control wiring shall be 45 or 65 stranded cable, Type SIS, and not smaller in size than #14 AWG tinned copper wire, with the exception that wiring to alarm auxiliary relays and indicating lights may be smaller in size. All current transformer leads are to be #10 AWG tinned copper or larger in size.

a. Power wiring shall be sized as required in accordance with the National Electrical Code.

b. All connections for wiring shall be made using silicon bronze, split-type lock washers, screws, and nuts.

c. All wires shall be identified at each end with legible permanent labels depicting termination location at the opposite end.

d. Wiring connections between fixed and hinged sections shall be a minimum 41-strand, flexible wire.

e. Seven-stranded control wire is not acceptable.

f. All terminal connections for conductor sizes #10 AWG and smaller shall be made with pre-insulated, full ring tongue, crimp-type lugs. Lugs shall be AMP, Inc. "Pre-Insulated Diamond-Grip" (PIDG) with nylon sleeves. Spade-type terminals or slip-on connectors are not acceptable.

g. All terminal connections for conductors sizes #2 AWG through #9 AWG shall be made with Burndy Insulug Type YAEV or approved equivalent.

h. All terminal connections for conductor sizes larger than #2 AWG shall be made with two-hole, long-barrel, double-indent crimp-type lugs; Burndy Hylug Type YA or approved equivalent. (Single-hole lugs may be used only where necessary.)

i. High-temperature insulated wire shall be used for connections to heaters.

8.6.2 Grommets shall be provided for all openings in metal barriers used for wiring.

8.6.3 Uninsulated exposed conductor or terminal lug shall not extend beyond the sides of the terminal block or its insulating barriers.

8.6.4 All leads for multi-ratio current transformers shall be wired to shorting-type terminal blocks in the control cabinet. If junction boxes are required in wiring between the current transformer and control cabinet, terminal blocks or splicing sleeves shall be used for wiring connections. In-line type disconnecting terminals such as American Petroleum Institute (API) No. 32448 or Burndy No. YZ10 will not be acceptable.

8.6.5 If accidental short circuiting of certain wires can result in malfunction of equipment, such as closing or tripping of the breaker, these wires shall not be terminated on adjacent terminal block points.

8.6.6 All wiring shall be neat and orderly.

8.6.7 The closed circuit shall be wired out to two (2) terminal block points to provide external blocking of any closed function with contact from the substation lockout relay.

8.6.8 The trip circuit shall be wired out to two (2) terminal block points to provide external tripping from the substation lockout relay.

8.6.9 No more than two (2) wires per terminal point are permissible.

8.7 Terminal Blocks and Fuse Holders

8.7.1 Molded-type terminal blocks, rated 600 volt, 30 amperes, for all control connections shall be provided. Terminal blocks with self-contained pressure-type connectors are not acceptable.

8.7.2 General Electric Type EB-25 or Marathon Type 1500 STD or approved equivalent terminal blocks shall be provided, furnished with white marking strips for identification of terminal wires for all connections except current transformers. Modular assembly style terminal blocks are not acceptable.

8.7.3 For current transformer leads, General Electric Type EB-27 or Marathon Type 1506SC or approved equivalent shorting terminal blocks shall be provided.

8.7.4 Each block shall be equipped with at least three shorting screws. A separate shorting type terminal block shall be provided for each set of current transformer leads.

8.7.5 General Electric Type EB-1 or Marathon Catalog No. 1422123 or approved equivalent power terminal blocks shall be provided for landing of Commission's single-phase, 3-wire, 240/120 volt ac control power leads and 125 volt dc control power leads.

8.7.6 A minimum of 15 percent spare (but not less than 12 points) terminal points shall be provided in the mechanism housing and cabinet. These terminal points shall be furnished with all connection hardware.

8.7.7 Fuse holders shall be Marathon RF30AXS (X = 2 for 2 poles, 3 for 3 poles, etc.) series fuse blocks or approved equivalent with hard-gripping fuse clips (reinforcing member) and straight slotted silicon bronze screws on each terminal, or approved equivalent.

8.7.8 A single-throw disconnect switch shall be installed on all fuse holders.

8.8 Current Transformers

8.8.1 Current transformers shall be considered part of the breaker and shall be coordinated with the breaker to meet all currents, voltages, and mechanical requirements of the breaker for steady state, surge, and fault conditions.

8.8.2 Multi-ratio bushing-type current transformers with relaying accuracy 10C800 or metering accuracy of 0.3B2.0 suitable for relaying, and indicating instrument or metering applications, shall be wired to shorting

terminal blocks in the mechanism and relay cabinet. The current transformer leads are to be permanently connected and properly identified to the shorting terminal blocks in the control cabinet. Each CT shall be wired to a separate terminal block; sharing of terminal blocks by different CTs shall not be allowed. Taps shall be provided in accordance with Table 10 of ANSI C57.13.

8.8.3 Multi-ratio current transformers shall be furnished as listed on bushing Nos. 1, 3, and 5, and bushing Nos. 2, 4, and 6, rated 10C800 or revenue metering accuracy class 0.3B2.0, suitable for relay and indicating instrument application, all wired to separate 6-point terminal blocks in the mechanism and relay cabinet. The current transformer leads are to be permanently connected and properly identified to the shorting terminal blocks. Terminal six of each of the terminal blocks is to be connected together, with one of the terminals tied to ground.

a. One (1) set of 3000/5-ampere multi-Ratio current transformers of relaying accuracy on each load-side bushing Nos. 2, 4, and 6 (Y) with leads brought down to the control cabinet.

b. One (1) set of dual ratios tap 0.3B1.8 accuracy with a ratio 1200/600:5 ampere current transformer of source side Bushing Numbers. 2, 4, and 6 (X) with leads brought down to the control cabinet.

c. Two (2) sets of 3000/5-ampere multi-Ratio current transformers of relaying accuracy C800 on each source-side bushing Nos. 1, 3, and 5 (X) and (Y) with leads brought down to the control cabinet.

8.8.4 All current transformers shall have a continuous thermal rating of 2.0 with 10 10-ampere continuously rated secondary.

8.9 Nameplates

8.9.1 Nameplates and their mounting screws shall be of noncorrosive metal and mounted in positions where they can be safely and easily read with the equipment in service.

8.9.2 Nameplates for the breakers shall include, as a minimum, the information required by ANSI C37.

8.9.3 Nameplates for current transformers that are mounted remotely from the breakers shall be mounted on the current transformer secondary housing. Nameplates for bushing-type current transformers, which are mounted in the breaker tank, shall be mounted in the breaker control cabinet adjacent to their CT terminal blocks. These nameplates shall include information required by ANSI C37.

8.9.4 All relays, switches, contactors, starters, and other devices shall be identified by nameplates.

8.10 Breaker Position Indicators

8.10.1 Mechanical-type breaker position indicators, positive as far as practical, shall indicate open and closed positions of the breaker; shall be clearly visible from the ground at reasonable distances; and shall not require opening of doors or special lighting. These shall be independent of control voltage.

8.10.2 Breaker position indicators shall be supplemented with LED indicating lamps operating on DC control voltage. Lamps shall be applied as follows:

a. One green lamp to indicate that all three poles are open. This lamp shall be connected to the DC closed circuit. The lamp(s) shall be located in the control cabinet.

b. One red lamp to monitor each trip circuit coil and to indicate that any breaker pole is in the closed position. This lamp shall be connected to the DC trip circuit. The lamp(s) shall be located in the control cabinet.

8.11 Terminal Connectors

8.11.1 Tin-plated terminal connectors, NEMA 4-hole spade type, shall be furnished with the breaker. They shall be adequately shielded and corona-free.

8.12 Pressure Switches

8.12.1 Devices for all uses, air and gas, for automatic control of pressure, for alarms, and for safeguard cutoffs, should be of the highest quality and proven reliability.

8.12.2 Contacts, ungrounded, shall be fully insulated and compatible with their associated equipment; those used in DC control circuits shall be suitable for 125V DC and shall withstand the full standard AC hi-pot test voltage required of switchboard control wiring.

8.12.3 All pressure switches shall have multiple electrically independent contacts and shall be furnished as needed:

a. To control compressors and maintain normal air pressure.

b. To alarm when pressure drops too low to permit full duty cycle operation.

c. To cut off closing if pressure is insufficient for a safe and satisfactory closing.

d. For interlocking and safeguards to ensure satisfactory performance of the three phases in unison.

8.12.4 A gas pressure manifold valve assembly shall be provided and shall be easily accessible for routine maintenance checks of pressure switches.

8.12.5 All pressure switches shall have dust covers.

8.12.6 All switch gauges shall have indicating dials.

8.13 Main Pole Interconnection and Adjustment

8.13.1 The main poles of the breaker shall be electrically or pneumatically interlocked. The design and arrangement shall be such that the interrupting contacts may be readily adjusted to touch and to part essentially simultaneously, and other adjustments may be made as are necessary for the proper operation of the breaker.

8.13.2 The above requirement for adjustability will not be necessary if proper settings are fixed as part of the manufacturing process and not subject to drifting from the proper points.

8.14 Auxiliary Equipment and Accessories

8.14.1 Each breaker shall be equipped with an operation counter.

8.14.2 General Electric Type HGA, ABB Type SG, or approved equivalent relays shall be provided for loss of voltage on all ac and dc circuits; low nitrogen; low mechanism working pressure; low SF6 pressure; and for blocking, tripping, or closing of the breakers.

8.14.3 Auxiliary relays, which perform either a trip or close, start-or-stop function, shall not be mounted on a hinged panel or door. All auxiliary relays shall have dust covers.

8.14.4 All alarm contacts shall be suitable for 125V DC, with separate wiring from each device to terminal blocks in the control cabinet.

8.14.5 Mounting facilities shall be furnished for a Doble Type MV motion velocity device.

8.14.6 Breakers shall be complete with a compressor as required.

8.14.7 Two normally open contacts from the breaker closing relay (52X) and one normally closed contact of the anti-pump relay (52Y) shall be wired to the terminal block for use by PWC. Either side of each contact shall be independently wired to the terminal block (two wires per contact). The 52Y

relay coil shall be rated for continuous operation at 125V DC. Contact interruption rating for an inductive circuit shall be 3 amperes at 125V DC. The normally open 52X contacts shall remain closed for a minimum of 10 cycles during a close operation.

8.14.8 Motors shall be 125V DC. They shall be drip-proof, with Class B insulation. They shall have sufficient capacity for all conditions of starting and continuous operation which their pump or compressor may impose, with temperature rise not to exceed 90°C above an ambient of 40°C and a service factor of 1.15. Each motor shall be equipped with its own thermal protection.

8.14.9 Breaker shall include twenty (20) stage convertible auxiliary switches, directly connected to the main operating linkage. This switch shall be made consistent with the requirements of Section 9.3.4 of these Specifications.

8.14.10 Necessary SF6 gas service connection fittings shall be provided.

8.14.11 Gas vent, as required, shall be provided.

8.14.12 Provision for travel recorder shall be included.

8.14.13 Breakers shall be equipped with a control switch. Switch shall be Electroswitch Series 24, Catalog No. 24570, with pistol grip spring return handle or approved equivalent.

NOTE: Associated breaker position lights are specified in 8.10.2.

8.15 Piping and Conduit

8.15.1 Furnish all necessary individual storage tanks, piping, valves, and conduit for the complete assembly of the breakers. Storage tanks required shall be manufactured to the requirements of the ASME Code Section VIII Division 1 and so stamped and registered with the National Board of Registration. Any safety and/or safety relief valves approved for service on these tanks shall also be constructed in compliance with the latest requirements of the ASME Boiler and Pressure Vessel Code. These valves shall also be stamped and registered with the National Board of Registration.

8.16 Special Tools and Lifting Devices

8.16.1 Furnish two sets of all special tools and hardware required for the removal and maintenance of the breakers.

8.16.2 Furnish any special lifting devices required for installation and or maintenance of the breakers and/or their accessories.

8.16.3 Furnish lifting eyes and lugs for vertically lifting the entire breaker assembly.

9.0 Spare Parts

9.1 The Bidder shall furnish with the Proposal a recommended spare parts list and spare parts price list, applicable to each breaker described in the Proposal. This list shall include, but is not limited to, the following:

9.1.1 Complete interrupter for one pole.

9.1.2 One full-capacity-rated bushing.

9.1.3 All pressure-limit switches, gauges, and alarm relays.

9.1.4 Hydraulic pump and motor, if applicable.

9.1.5 Pneumatic pump and motor, if applicable.

9.1.6 One close coil and one trip coil.

9.1.7 One each, of each type of electric motor.

9.1.8 Three each of each type of gasket.

9.1.9 Three absorber sets, if used.

9.1.10 One each of each type of relay coil.

9.1.11 One heater element.

9.1.2 The above requirements are for spare parts and prices in the Proposal, but it is not the intention of this Specification that these parts be furnished as part of the Purchase Order.

10.0 Alarms

10.1 The annunciator(s) shall be a ten-window annunciator model SEL-2533 manufactured by Schweitzer Engineering Laboratories, Inc. or approved equivalent. The annunciator(s) shall use a 125V DC power supply, 125V DC control voltage, support DNP 3.0 communication protocol, and have 14 digital inputs and 7 digital outputs. The full model number shall be 2533022130XC2X0.

10.2 The following typical alarms are to be identified:

10.2.1 SF6 Gas Pressure Low Alarm

10.2.2 SF6 Gas Pressure Lockout

10.2.3 Trip Coil Monitors (TC1 & TC2)

10.2.4 Loss of AC

10.2.5 Local / Remote Control (alarm when in Local control)

This listing may change depending on the specific application and equipment available on the breaker.

10.3 Contact outputs from the annunciator(s) shall be wired to terminal blocks for customer use. One (1) contact output shall be dedicated to provide an alarm summary.

11.0 Tests

11.1 The tests shall be performed on the breakers as a three-phase unit.

11.2 Production tests shall be performed on each breaker and associated bushing current transformer, bushings, and relays as required by present-day standards.

11.3 Design tests shall be conducted on the breakers unless design tests have been conducted on a duplicate breaker of previous manufacture.

11.4 Additional tests shall be conducted if not included in the production and design tests, as follows:

11.4.1 Take operations data on each interrupter by means of a Doble breaker analyzer or a Honeywell Visicorder or approved equivalent, under normal gas and air pressure and control voltage to demonstrate compliance with this Specification and guaranteed values. Furnish charts showing:

a. Opening at normal voltage and pressure.
b. Opening at minimum voltage and pressure.
c. Closing at normal voltage and pressure.
d. Closing at minimum voltage and pressure.
e. Close and trip free at normal voltage and pressure.

11.4.2 The above data shall show contact travel against cycle (60-Hertz basis) and shall have the following points marked thereon if applicable:

Opening Operation

a. Trip coil energized
b. Air or gas blast starts
c. Main contacts part
d. Main contacts fully open

e. Air or gas blast stops

Closing Operating

a. Closing coil energized
b. Main contacts touch
c. Main contacts fully closed

11.4.3 Tank test - air or hydrostatic (ASME and State).

11.4.4 Dielectric test on all control wiring and accessories.

11.4.5 Ratio check of current transformers - submit correction curves.

11.5 If the breakers or any of their auxiliaries or accessories fail to pass the tests specified, additional tests shall be made to locate the failure. After rework or repair of the failure, the specified tests shall be repeated to ensure that the repaired breakers, auxiliary, or accessories will meet the Specification in all respects.

11.6 Rework or repair and retesting shall be done at Bidder's expense.

11.7 Bidder shall keep a record of all failures detected during tests, of rework or repair required, and of test data taken after rework or repairs have been completed.

11.8 Rework or repairs shall be made in accordance with an approved procedure signed by that party responsible for giving in-process disposition of such rework or repairs.

11.9 The Field Service Engineer shall perform a series of tests after the breakers are installed to ensure that it is functioning properly and that all components and wiring are properly connected. Gas tests shall be made. Current transformer checks shall be conducted for polarity, turns ratio, and connections. The Field Service Engineer shall give approval for energizing the breakers, and shall remain to observe the entire energization process. The Field Service Engineer shall also provide training to PWC’s maintenance personnel during checkout of the breakers.

ATTACHMENT B: BID PRICING FORM – BID SCHEDULE NO. 1 – BASE BID

Bidder Information:

Name of Company _____

Address _____

Phone Number _____

Email Address _____

Manufacturer _____

Manufacturer Location _____

Printed Name _____

Title _____

Signature _____

Date _____

Bidders shall submit bids only on the Bid Pricing Forms provided herein, or exact copies thereof. Each bidder must sign the Bid Pricing Form and provide the manufacturer's name and lead timefor each line item. Failure to provide a full and complete Bid Pricing Form, including the required signature, manufacturer's name, and lead time, will result in the bid being deemed non-responsive, as PWC will not have the necessary information to properly evaluate the bids.

Furnish And Deliver:

DESCRIPTION	UNIT PRICE	EXTENDED PRICE / BASE BID
Two (2) Circuit Breakers Gang Operated rated 230 kV nominal, 245 kV maximum, 3000 amperes continuous current carrying capacity at 60 Hertz with a minimum of 63,000 amperes symmetrical interrupting rating, 900 kV BIL furnished with three (3) sets of 3000:5 C800 relay ratio current transformers, and one (1) set of 600/1200:5 dual tap ratio metering accuracy current transformers. Manufacturer: _____ Type: _____ Lead Time: _____	$	$

Delivery Schedule:

The prices of the materials and equipment set forth herein shall include the cost of delivery to the site at the Bidder's risk. The date of delivery shall be in compliance with section 5.1 of the technical specifications.

	Delivery (Number of Days) *
a. Approval Drawings*	_____
b. Final Drawings *	_____
c. Delivery *	_____

* Number of consecutive calendar days (NOT business days) after receipt of written orders from PWC.

(1) Submittal of drawings to the Engineer shall follow promptly after issuance of Purchase Order. Delaying drawings because manufacturing/delivery schedule allows for it is not acceptable.

(2) Allow two (2) weeks for the Engineer's review and turnaround for all Drawing submittals.

The time for delivery shall be extended for the period of any reasonable delay due exclusively to causes beyond the control and without fault of the Bidder, including acts of God, fires, floods, strikes, and delays in transportation.

ATTACHMENT C: FORMS OF EXCEPTIONS – SALE OF GOOD AGREEMENT

BIDDER: _____

MANUFACTURER: _____

INSTRUCTIONS: The following is a list of exceptions to the Sale of Good Agreement pertaining to the furnishing of the subject materials. Bidders shall identify each exception by page and paragraph number on this form. The omission of exceptions implies complete compliance with the Sale of Good Agreement.

PAGE NO. AND PARAGRAPH	EXCEPTION/VARIATION

If, in submitting this bid, the bidder has made any exceptions to bid documents, the bidder understands that PWC will evaluate the effect of such exceptions in determining the award of the agreement.

ATTACHMENT D: FORMS OF EXCEPTIONS – TECHNICAL SPECIFICATIONS

BIDDER: _____

MANUFACTURER: _____

INSTRUCTIONS: The following is a list of exceptions to the Technical Specifications pertaining to the furnishing of the subject materials. Bidders shall identify each exception by page and paragraph number on this form. The omission of exceptions implies complete compliance with the Specification.

PAGE NO. AND PARAGRAPH	EXCEPTION/VARIATION

If, in submitting this bid, the bidder has made any exceptions to bid documents, the bidder understands that PWC will evaluate the effect of such exceptions in determining the award of the agreement.

ATTACHMENT E: CERTIFICATION OF PRIMARY PARTICIPANT REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The Primary Participant, _____ (major third party contractor), certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction or records, making false statements, or receiving stolen property;

3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and

4. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(If the primary participant is unable to certify to any of the statements in this certification, the participant shall attach an explanation to this certification.)

THE PRIMARY PARTICIPANT _____ CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET. SEQ. ARE APPLICABLE THERETO.

_____	_____
Signature	Title
_____	_____
Printed Name	Date

PWC at a Glance

PWC Fayetteville's HOMETOWN UTILITY

Customers

- In operation since 1905
- Provides Electric, Water & Wastewater Services
- Total Customers: 121,886
- Number of Services: 274,101
  - Electric: 83,537
  - Water: 92,453
  - Wastewater: 92,100
  - Irrigation: 6,011
- Customers with 2+ services: 75%
- Annual Customer Turnover: 20-25%

Customer Service

- Annual Customer Contacts: 495,136
- Average Monthly Calls: 32,363
- Annual Bills Generated: 1.4 Million
- Customer Incentive Programs: 13
- Annual Water Leak Notifications: 20,363 (17.2 million gal)

Employees

- Number of Employees: 651
- Average Tenure of Employees: 10 years
- Average Age: 45
- Annual Turnover: 9.0%*
- Annual Hours Worked: 1.2 Million

*non retirement

Facilities

- Butler-Warner Generation Plant (268 MW)
  - Electric Service Area: 147 Sq. miles
- P.O. Hoffer Water Treatment Facility (39.5 MGD)
- Glenville Lake Water Treatment Facility (18.0 MGD)
  - Drinking Water Service Area: 116 Sq. miles
- Cross Creek Water Reclamation Facility (25 MGD)
- Rockfish Creek Water Reclamation Facility (21 MGD)
  - Wastewater Service Area: 109 Sq. miles

Electric Operations

- Purchase Wholesale Power from Duke Energy
- Only NC municipal system to own/operate a generation plant (Dispatched for use by Duke Energy)
- Generation Capacity: 268 MW
- Solar Generation: 1 MW
- Battery Storage: 2 MW
- Annual MWH Sold: 1.9 million
- System Peak: 499 MW (Feb. 9, 2015)
- Reliability Rate: 99.99%
- Electric Distribution Substations: 32
- Distribution Lines: 1,360 miles
- Transmission Lines: 123 miles
- Streetlights/Area Lights: 37,853

Water/Wastewater Operations

- Population Served: 225,000
- Drinking Water Treated: 10.7 Billion Gallons/Year
- 100% Compliant for all EPA Drinking Water Standards
- Daily Water Treatment Capacity: 57.5 MG/Day
- Daily Wastewater Treatment Capacity: 46 MG/Day
- Water/Wastewater Infrastructure: 2,825 miles
- Hydrants: 8,616
- Sanitary Sewer Lift Stations: 78
- Manholes: 34,002

Financial

- FY24 Annual Operating Budget: $428.8 Million
- Total Assets: $1.62 Billion
- Bond Rating: Aa2(Moody's), AA (Standard & Poor), AA (Fitch)
- Operations & Maintenance Expense per Customer: $505 ($557 National Median)
- Annual Cash Contributions to the City of Fayetteville in Lieu of Taxes: $12.2 Million
- Annual Streetlight Services: $3.9 Million
- Annual Annexation Construction Costs: $4.8 Million
- Total Annual Contributions to the City of Fayetteville: $25.4 Million

Visit www.faypwc.com to learn more about PWC

(As of May, 2024)

ATTACHMENT G:

SALE OF GOODS AGREEMENT

This Sale of Goods Agreement ("Agreement") is made by and between the City of Fayetteville (the "City"), by and through the Fayetteville Public Works Commission ("PWC"), a North Carolina public authority, and _____[insert seller's full legal name] ("Seller"), a _____ [identify the legal entity and State in which formation was accomplished] (each of PWC and Seller is a "Party" and both are collectively the "Parties") as of the date of execution last written below (the "Effective Date"). In consideration of the mutual covenants and agreements contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, The Parties agree as follows:

1. Sale of Goods. Seller shall sell to PWC and PWC shall purchase from Seller the following [Identify the goods specifically] (the "Goods"). PWC may issue a purchase order for the Goods that specifies any additional applicable terms and conditions set forth for the purchase (a "Purchase Order"), but such Purchase Order is subject to the terms of this Agreement. In the event of a conflict between the provisions of this Agreement and the provisions of any Contract Documents, attachment, exhibit or Purchase Order made pursuant to this Agreement, the terms of this Agreement shall govern.

2. Contract Documents. "Contract Documents" means, collectively, the following documents that were either made available to Seller by PWC during the bid solicitation process (including Drawings) or executed by the Parties, or both, which are all incorporated by reference herein:

a. This Agreement
b. Notice to Prospective Bidders
c. Definitions
d. Instructions to Bidders
e. General Conditions
f. Materialman's Proposal
g. Bid Bond
h. Technical Specifications
i. Purchase Order(s)
j. Addenda

3. Delivery of Goods. Seller shall deliver the Goods [EITHER: "on or before _____" OR "as specified in the Contract Documents or an applicable Purchase Order issued by PWC" OR "as otherwise agreed in writing by the Parties"] (the "Delivery Date"). Timely delivery of the Goods is of the essence. If Seller fails to deliver the Goods on or before the Delivery Date, PWC may, without any liability to Seller, terminate this Agreement immediately by providing written notice to Seller. Unless otherwise specified in an applicable Purchase Order or the Contract Documents, excluding this Agreement, all Goods shall be delivered to PWC's Warehouse at 955 Old Wilmington Road, Fayetteville, North Carolina 28301 (the "Delivery Point") during PWC's normal business hours. Delivery shall be made FOB Delivery Point.

4. Title and Risk of Loss. Title of the Goods passes to PWC upon delivery of the Goods to the Delivery Point. Seller bears all risk of loss or damage to the Goods until delivery of the Goods to the Delivery Point.

5. Packaging. Seller shall properly pack, mark, and ship the Goods as instructed by PWC and otherwise in accordance with applicable law and industry standards and shall provide PWC with all shipment documentation showing the quantity of pieces in shipment, the number of cartons or containers in shipment, Seller's name, the airway bill or bill of lading number, and the state of origin.

6. Inspection and Rejection of Nonconforming Goods. PWC has the right to inspect the Goods on or after the Delivery Date. PWC, at its sole option, may inspect all or a sample of the Goods, and may reject all or any portion of the Goods if it determines the Goods are nonconforming or defective. If PWC rejects any portion of the Goods, PWC has the right, effective upon written notice to Seller, to: (a) terminate this Agreement in its entirety and require Seller to remove the Goods in a commercially reasonable time period or pay the full cost and expense to have the rejected Goods returned to Seller; or (b) reject the Goods and require replacement of the rejected Goods at Seller's sole expense. If PWC requires replacement of the Goods, Seller shall, at its sole expense and in the lesser of ninety (90) days or the number of days between any applicable Purchase Order of PWC and the Delivery Date, replace the nonconforming Goods and pay for all related expenses, including, but not limited to, transportation charges for the return of the defective goods and the delivery of replacement Goods. Any inspection or other action by PWC under this Section shall not reduce or otherwise affect Seller's obligations under this Agreement, including Seller's warranties, and PWC shall have the right to conduct further inspections after Seller has carried out its remedial actions.

7. Price. PWC shall purchase the Goods from Seller in the total amount of $_____ ("Price"). The Price includes all packaging, transportation costs to the Delivery Location, insurance, fees, and applicable taxes, including, but not limited to, all sales, use, or excise taxes. No increase in the Price is effective, whether due to increased material, labor, transportation costs or otherwise, without the prior written consent of PWC.

8. Billing and Payment. Seller shall invoice PWC within thirty (30) days after the completion of the delivery of the Goods. PWC shall pay the undisputed portion of the invoice within forty-five (45) calendar days after PWC's receipt of the invoice. All payments from PWC to Seller shall be transferred electronically to Seller's designated financial institution, and Seller shall, prior to delivery of its invoice to PWC, supply the name of Seller's financial institution, routing number, and account number on the form available from PWC and provide to PWC a completed and signed IRS Form W-9. Seller has the right to impose a late payment charge of one percent (1%) per month for amounts unpaid by PWC by the date due.

Provider shall comply with all of the following requirements so that PWC may recover the full amount of sales and use tax under North Carolina law permitted under the law:

a. Furnish PWC documentary evidence showing the material used, sales tax paid, and County paid (County of sale). The documentary evidence shall include Provider's certified statement showing total purchases of materials from each separate vendor and total sales taxes charged to PWC and paid by Provider. The documentary evidence shall also include Provider's certified statement as to the amount paid by PWC for sales tax on the Goods. A certified form is required even if no sales tax was paid for the pay request period. Materials used from Provider's warehouse stock shall be shown in a

certified statement at warehouse stock prices and amount of County of Use Tax charged to PWC and paid by Provider;

b. Provider shall furnish to PWC invoices or copies of invoices for all materials purchased for said work within pay request period, and such invoices shall state the amount of North Carolina Sales Tax, if any, paid for the Goods. Provider shall also furnish to PWC invoices identifying the amount paid for the sales and use tax on Services that are subject to such taxation under North Carolina law; and

c. Provider shall not include any tax paid on supplies, tools, and equipment that Provider uses to perform its obligations under this Agreement.

9. Warranties. Seller warrants to PWC that for a period of twenty-four (24) months from the Delivery Date, all Goods will: (a) be free from any defects in workmanship, material and design; (b) conform to applicable specifications, drawings, designs, samples and other requirements set forth in the Contract Documents or as specified by PWC and agreed to by Seller; (c) be fit for their intended purpose and operate as intended; (d) be free and clear of all liens, security interests, or other encumbrances; and (e) not infringe or misappropriate any third party's patent or other intellectual property rights. These warranties survive any delivery, inspection, acceptance or payment of or for the Goods by PWC. These warranties are cumulative and in addition to any other warranty provided by law or equity. Any applicable statute of limitations runs from the date of PWC's discovery of the noncompliance of the Goods with the foregoing warranties. If PWC gives Seller notice of noncompliance with this Section 9, Seller shall, at its own cost and expense, within thirty (30) days replace or repair the defective or nonconforming Goods and pay for all related expenses, including, but not limited to, transportation charges for the return of the defective or nonconforming goods to Seller and the delivery of repaired or replacement Goods to PWC.

10. Termination. Notwithstanding any other or additional remedies that may be provided under this Agreement, PWC may terminate this Agreement with immediate effect upon written notice to the Seller, either before or after the acceptance of the Goods, if: (a) Seller repudiates, or threatens to repudiate, any of its obligations under this Agreement; (b) Seller is in breach of, or threatens to breach, any representation, warranty, or covenant of Seller under this Agreement and either the breach cannot be cured or, if the breach can be cured, it is not cured by Seller within a commercially reasonable period of time under the circumstances, in no case exceeding seven (7) days following Seller's receipt of Notice of such breach; (c) Seller fails to, or threatens to fail to, timely deliver Goods conforming to the requirements of, and otherwise in accordance with, the terms and conditions of this Agreement; or (d) Seller becomes insolvent, files a petition for bankruptcy, or commences or has commenced against it proceedings relating to bankruptcy, receivership, reorganization, or assignment for the benefit of creditors. PWC shall be obligated to pay Seller only for work performed and reasonable expenses incurred until delivery of the notice of termination.

11. Insurance. During the term of this Agreement and for a period of three (3) years after the date of this Agreement, Seller shall, at its own expense, maintain and carry insurance in full force and effect that includes, but is not limited to, commercial general liability (including product liability) with limits no less than $1,000,000 for each occurrence and $3,000,000 in the aggregate and umbrella liability in a sum no less than $5,000,000, which insurance shall be placed with insurance companies authorized to do business in the State of North Carolina and rated A minus VII or better by the current edition of Best's Key Rating Guide or otherwise approved in writing by PWC. Prior to delivering any Goods, Seller shall deliver to PWC

certificates of insurance confirming each such coverage, and Seller shall direct its insurers to provide annually to PWC certificates confirming each such coverage during the coverage period. PWC shall be named as an additional insured in the insurance policy. Seller shall not reduce or allow the required insurance coverages to lapse without PWC's prior written approval. All policies for insurance must be endorsed to contain a provision giving PWC a thirty (30) calendar day prior written notice by certified mail of any cancellation of that policy or material reduction in coverage. Should a notice of cancellation be issued for non-payment of premiums or any part thereof, or should Seller fail to provide and maintain certificates as set forth herein, PWC shall have the right, but not the obligation, to pay such premium to the insurance company or to obtain such coverage and to deduct such payment from any sums that may be due or become due to Seller, or to seek reimbursement for said payments from Seller. Any such sums paid by PWC shall be due and payable immediately by Seller upon notice from PWC. The insurance provisions of this Agreement shall not be construed as a limitation on Seller's responsibilities and liabilities pursuant to the terms and conditions of this Agreement.

12. Indemnification. Seller shall indemnify, defend, and hold harmless PWC and its Commissioners, officers, employees, agents, and representatives (collectively, "Indemnitees") from and against all claims, actions, liabilities, damages, losses, costs, and expenses (including, without limitation, injury to or death of any persons and damage to property, economic and consequential damages and attorneys' fees) asserted by one or more third parties against one or more of the Indemnitees arising out of negligent or willful acts, violations of law, infringement of any patent, trademark, trade secret, copyright, or other intellectual property right of a third party, or omissions or breach of the obligations set forth in this Agreement by Seller or any of its employees, agents, representatives, and subcontractors. Seller's obligation to indemnify, defend, and hold harmless the Indemnitees shall survive the termination of this Agreement and shall include the duty to pay for the reasonable attorney's fees and costs associated with defending the Indemnitee(s) by the legal counsel of each Indemnitee's choice.

13. Notices. Any notice which either Party is required or desires to give the other shall be deemed sufficiently given if, in writing, it is delivered personally, or sent by certified U.S. mail, return-receipt requested, postage prepaid, to the addresses listed hereinbelow, or such other address as either Party shall give to the other Party by written notice in accordance herewith. Any notice given herein by personal delivery shall be deemed delivered when received. Any properly addressed notice given herein by certified mail shall be deemed delivered on the third Business Day after the same is deposited in an official United States Post Office, postage prepaid, or if sooner upon the date when the return receipt therefor is signed, or refusal to accept the mailing by the addressee is noted thereon by the postal authorities.

To PWC:
Fayetteville Public Works Commission
Attn: Timothy Bryant, CEO/General Manager
PO Box 1089
Fayetteville, NC 28302

To Seller:
[INSERT MAILING ADDRESS]

14. Compliance. Seller hereby acknowledges that "E-Verify" is the federal E-Verify program operated by the US Department of Homeland Security and other federal agencies which is used to verify the work authorization of newly hired employees pursuant to federal law

and in accordance with Article 2, Chapter 64 of the North Carolina General Statutes. Seller further acknowledges that all employers, as defined by Article 2, Chapter 64 of the North Carolina General Statutes, must use E-Verify and after hiring an employee to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with NCGS §64-26(a). Seller hereby pledges, attests, and warrants through execution of this Agreement that Seller complies with the requirements of Article 2, Chapter 64 of the North Carolina General Statutes and further pledges, attests, and warrants that all subcontractors currently employed by or subsequently hired by Seller to provide services for PWC shall comply with all E-Verify requirements. Failure to comply with the above requirements shall be considered a breach of this Agreement. Seller hereby further acknowledges that the execution and delivery of this Agreement constitutes Seller's certification to PWC and to the North Carolina State Treasurer that, as of the Effective Date, Seller is not listed on (a) the Final Divestment List created and maintained by the North Carolina Department of State Treasurer pursuant to the Iran Divestment Act of 2015, Chapter 147, Article 6E of the General Statutes of North Carolina (the "Iran Divestment Act"); or (b) the list of companies that the North Carolina State Treasurer determines to be engaged in a boycott of Israel in accordance with Article 6G of Chapter 147 of the General Statutes of North Carolina. Seller represents and warrants to Commission that Seller, and all persons and entities owning (directly or indirectly) an ownership interest in it: (i) are not, and will not become, a person or entity with whom a party is restricted from doing business with under regulations of the Office of Foreign Asset Control ("OFAC") of the Department of the Treasury (including, but not limited to, those named on OFAC's Specially Designated and Blocked Persons list) or under any statute, executive order (including, but not limited to, the September 24, 2001, Executive Order 13224 Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism), or other governmental action; and (ii) are not knowingly engaged in, and will not knowingly engage in, any dealings or transactions or be otherwise associated with such persons or entities described in clause (i) above. Seller also shall at all times during the term of this Agreement comply with Executive Order 11246, including but not limited to the Equal Opportunity Clause requirements set forth in 41 C.F.R. § 60-1.4. Seller shall abide by the requirements of 41 CFR 60-300.5(a) and 60-741.5(a) prohibiting discrimination against qualified individuals on the basis of protected veteran status or disability and requiring affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans and individuals with disabilities.

15. Cumulative Remedies. All rights and remedies provided in this Agreement are cumulative and not exclusive, and the exercise by either Party of any right or remedy does not preclude the exercise of any other rights or remedies that may now or subsequently be available at law or in equity.

16. Miscellaneous Provisions. Seller is and shall remain an independent contractor. Nothing contained in this Agreement shall be deemed or construed to create the relationship of principal and agent or of partnership or of joint venture or of any association whatsoever between the Parties. No breach or non-performance of any term of this Agreement shall be deemed to be waived by either Party unless said breach or non-performance is waived in writing and signed by the Parties. No waiver of any breach or non-performance under this Agreement shall be deemed to constitute a waiver of any subsequent breach or non-performance, and for any such breach or non-performance each Party shall be entitled to such remedies as provided by law. No consent or waiver by a Party shall be effective unless it is in writing and then only to the extent specifically stated. The invalidity, illegality, or un-enforceability of any portion or provision of this Agreement shall in no way affect the validity, legality, and/or enforceability of

any other portion or provision of this Agreement. Any invalid, illegal, or unenforceable provision of this Agreement shall be deemed severed from this Agreement, and the balance of the Agreement shall be construed and enforced the same as if the Agreement had not contained any portion or provision which was invalid, illegal, or unenforceable; provided, however, severability shall not prevent this entire Agreement from being void in the event any portion or provision of this Agreement that is of the essence of this Agreement shall be void. This is the entire agreement of the Parties on the subject matter hereof, and all prior negotiations, representations, proposals, letters, agreements, understandings, or other communications between the Parties, whether written or oral, are hereby merged into the Agreement and superseded by this Agreement. This Agreement shall not be modified unless such modifications are evidenced in writing, signed by both Parties. Nothing herein shall be construed to give any right or benefits hereunder to anyone other than the Parties. This Agreement shall be governed by the laws of the State of North Carolina without the application of the laws of any other state. The exclusive venue for all mediations and litigation and any other legal proceedings regarding this Agreement shall be the State and Federal Courts serving Cumberland County, North Carolina, and Seller consents to personal jurisdiction in such courts. Seller irrevocably waives, to the fullest extent permitted by law, any objection that it may now or hereafter have to the laying of the venue of any such suit, action or proceeding in any such court serving Cumberland County or that any such suit, action or proceeding brought in any such court serving Cumberland County has been brought in an inconvenient forum. This Agreement may be executed in counterparts with the same effect as if the signatures to each counterpart were upon a single instrument, and all such counterparts together shall be deemed an original of this Agreement. For purposes of this Agreement, a facsimile copy or scanned copy or photocopy of a party's signature shall be sufficient to bind such party. This Agreement shall be subject to execution by electronic means in accordance with Article 40 of Chapter 66 of the North Carolina General Statutes. The titles of the paragraphs throughout this Agreement are for convenience only and the words contained therein shall in no way be held to explain, modify, amplify, or aid in the interpretation, construction, or meaning of the provisions of this instrument.

17. Conflicts. Except with PWC's knowledge and prior written consent, the Seller shall not engage in any activity or accept any employment, interest or contribution that would reasonably appear to compromise the Seller's professional judgment with respect to the Goods. The Seller shall disclose to PWC any business or personal relationship with any Commissioner, officer, director, manager, or supervisor of PWC.

IN WITNESS WHEREOF, the Parties have executed this Agreement by their duly authorized representatives as of the Effective Date.

Fayetteville Public Works Commission	[INSERT SELLER'S FULL LEGAL NAME]
By: _____	By: _____
Timothy Bryant, CEO/General Manager	_____, _____
	(Printed Name) (Title)
Date: _____	Date: _____

This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act (N.C. Gen. Stat. § 159-1 et seq.).

By: _____
Rhonda Haskins, Chief Financial Officer

Approved as to form:

_____
Legal Dept.

ATTACHMENT H: BID SUBMITTAL CHECKLIST

To ensure your bid is considered for evaluation and potential award, the following forms and required information must be submitted in full. Each item on this checklist must be completed and provided with your bid response. Failure to submit any required documentation or information may result in disqualification. Please carefully review the checklist to confirm all required materials are included before submitting your bid.

- ☐ 1. Properly Marked Sealed Bid (Submission Instructions paragraph 4)
- ☐ 2. References (provided on page 6)
- ☐ 3. Descriptive Literature (Attachment A)
- ☐ 4. Deviations (Attachment C and D)
- ☐ 5. Attachment B Company Information (completed and signed)
- ☐ 6. Attachment B Manufacturer Information (provided)
- ☐ 7. Attachment B Lead Time Information (provided)
- ☐ 8. Attachment B Unit Price Information (provided)
- ☐ 9. Attachment E (completed and signed) or Explanation (provided)
- ☐ 10. Addendum 1, if applicable (acknowledged and signed)
- ☐ 11. Addendum 2, if applicable (acknowledged and signed)
- ☐ 12. Addendum 3, if applicable (acknowledged and signed)
- ☐ 13. Addendum 4, if applicable (acknowledged and signed)