

CITY OF PIQUA POWER SYSTEM

# Invitation for Bid

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Distribution Transformers

IFB No. 1036

Piqua Power System  
123 Bridge Street  
Piqua, OH 45356

**12/6/2010**

**Transformer BID 2011  
To the  
City of Piqua, Ohio  
Power System**

Reply to Invitation for Bid No. 1036 No Later Than 2:00 PM 1-10-2011

The undersigned proposes and agrees to furnish any or all items bid and to deliver them to the specific destination at the prices stated herein.

For further information contact:

**Nick Berger, Electrical Engineer**

**Phone: 937-778-2077**

**Email: [nberger@piquaoh.org](mailto:nberger@piquaoh.org)**

Your sealed, written bid is requested for: DISTRIBUTION TRANSFORMERS per the included bid form and specifications.

**Bids must be received in Power System Office at 123 Bridge St. Piqua, OH 45356 no later than: 2:00 PM January 10<sup>th</sup>, 2011.**

Envelopes shall be plainly marked: **IFB 1036 DISTRIBUTION TRANSFORMERS** on left, lower corner of envelope.

User agency: Piqua Power System

Submit signed original bid and one (1) copy of the bid.

Contact Nick Berger at [nberger@piquaoh.org](mailto:nberger@piquaoh.org) in writing with any questions on specifications, etc. no later than 5:00PM 12-20-10. Any changes will be distributed to all known potential bidders and posted on our web site at [www.piquaoh.org](http://www.piquaoh.org). All vendors are responsible for checking this site for any additional information.

**Bidder is requested to use the City's bid form that is enclosed, as none other will be accepted.**

**LEGIBLE INFORMATION MUST BE GIVEN IN THE SPACES PROVIDED.**

A copy of the Bid Tabulation may be obtained by sending a stamped self-addressed envelope.

All federal, state, and local laws regarding competitive bidding, anti competitive practices, and conflict of interest shall be applicable to this I.F.B.

Bids are to include all shipping costs to the point of delivery as indicated above.

The City of Piqua is exempt from payment of federal excise taxes and state retail sales taxes (Federal Excise Tax Exemption Certification No. 31-6000136).

State Manufacturer and Model No. of items you are bidding and send DESCRIPTIVE LITERATURE on same with your bid. Any brand names on our bid form are to establish quality levels and do not indicate preference.

The City of Piqua reserves the right to reject any or all bids, to waive any irregularities in a bid, or to accept the bid or bids which the judgment of proper officials, is to the best interest of the City.

The City of Piqua reserves the right to accept a part or parts of a bid unless otherwise restricted in the bid.

If you are not in a position to quote, advise to this effect so we may keep your name on our active bid list.

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THE UNDERSIGNED HEREBY CERTIFIES THAT ITEMS FURNISHED AS A RESULT OF THIS BID WILL BE IN FULL ACCORFANCE WITH THE CITY OF PIQUA SPECIFICATIONS APPLYING THERETO UNLESS EXCEPTIONS ARE STATED. THE CITY OF PIQUA RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS, TO WAIVE ANY IRREGULARITIES IN A BID, OR TO ACCEPT THE BID OR BIDS WHICH THE JUDGMENT OF PROPER OFFICALS, IS TO THE BEST INTEREST OF THE CITY. THE CITY OF PIQUA RESERVES THE RIGHT TO ACCEPT A PART OR PARTS OF A BID UNLESS OTHERWISE RESTRICTED IN THE BID.

BIDDING COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
CITY STATE ZIP CODE

BY: \_\_\_\_\_  
(PLEASE PRINT OR TYPE) NAME AND TITLE

SIGNATURE: \_\_\_\_\_

PHONE NO: \_\_\_\_\_ FAX NO: \_\_\_\_\_

FED ID NO: \_\_\_\_\_ EMAIL: \_\_\_\_\_

ALL DELIVERY COSTS ARE INCLUDED IN THIS QUOTATION REGARDLESS OF F.O.B DESIGNATION

CASH DISCOUNT ALLOWED: \_\_\_\_\_ % 10<sup>TH</sup> PROXIMO. (LEAVE BLANK IF YOUR TERMS ARE NET 30 DAYS)

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDAR DAYS AFTER RECEIPT OF ORDER

PRICES QUOTED WILL REMAIN FIRM FOR ACCEPTANCE WITHIN 60 CALENDAR DAYS AFTER BID OPENING UNLESS OTHERWISE STATED

MANUFACTURER SHALL SUBMIT THE "GUARANTEED LOSSES" PER ANSI C57.12.00-1980

PHYSICAL DATA: ATTACH DRAWING FOR THE ABOVE TRANSFORMER TANKS WITH THE WEIGHT INDUCATED

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1. CLASS "A" DISTRIBUTION TRANSFORMER  
SINGLE PHASE, OVERHEAD KVA: 50  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 240/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

2. CLASS "A" DISTRIBUTION TRANSFORMER  
SINGLE PHASE, OVERHEAD KVA: 50  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 277/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

MANUFACTURER SHALL SUBMIT THE "GUARANTEED LOSSES" PER ANSI C57.12.00-1980

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3. CLASS "A" DISTRIBUTION TRANSFORMER  
SINGLE PHASE, OVERHEAD KVA: 75  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 240/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

4. CLASS "A" DISTRIBUTION TRANSFORMER  
SINGLE PHASE, OVERHEAD KVA: 75  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 277/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

MANUFACTURER SHALL SUBMIT THE "GUARANTEED LOSSES" PER ANSI C57.12.00-1980

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5. CLASS "A" DISTRIBUTION TRANSFORMER  
 SINGLE PHASE, OVERHEAD KVA: 100  
 PRIMARY VOLTAGE 7620/13200 Wye  
 SECONDARY VOLTAGE 240/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

6. CLASS "A" DISTRIBUTION TRANSFORMER  
 SINGLE PHASE, OVERHEAD KVA: 100  
 PRIMARY VOLTAGE 7620/13200 Wye  
 SECONDARY VOLTAGE 277/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

MANUFACTURER SHALL SUBMIT THE "GUARANTEED LOSSES" PER ANSI C57.12.00-1980

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7. CLASS "A" DISTRIBUTION TRANSFORMER  
SINGLE PHASE, OVERHEAD KVA: 167  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 240/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

8. CLASS "A" DISTRIBUTION TRANSFORMER  
SINGLE PHASE, OVERHEAD KVA: 167  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 277/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

MANUFACTURER SHALL SUBMIT THE "GUARANTEED LOSSES" PER ANSI C57.12.00-1980

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9. CLASS "A" DISTRIBUTION TRANSFORMER  
SINGLE PHASE, OVERHEAD KVA: 250  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 240/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

10. CLASS "A" DISTRIBUTION TRANSFORMER  
SINGLE PHASE, OVERHEAD KVA: 250  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 277/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

MANUFACTURER SHALL SUBMIT THE "GUARANTEED LOSSES" PER ANSI C57.12.00-1980

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11. PADMOUNT DISTRIBUTION TRANSFORMER  
SINGLE PHASE, UNDERGROUND KVA: 50  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 120/240

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

12. PADMOUNT DISTRIBUTION TRANSFORMER  
SINGLE PHASE, UNDERGROUND KVA: 167  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 120/240

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

MANUFACTURER SHALL SUBMIT THE "GUARANTEED LOSSES" PER ANSI C57.12.00-1980

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13. PADMOUNT DISTRIBUTION TRANSFORMER  
**THREE PHASE**, UNDERGROUND KVA: 225  
 PRIMARY VOLTAGE 7620/13200 Wye  
 SECONDARY VOLTAGE 120/208

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

14. PADMOUNT DISTRIBUTION TRANSFORMER  
**THREE PHASE**, UNDERGROUND KVA: 300  
 PRIMARY VOLTAGE 7620/13200 Wye  
 SECONDARY VOLTAGE 277/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

MANUFACTURER SHALL SUBMIT THE "GUARANTEED LOSSES" PER ANSI C57.12.00-1980

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15. PADMOUNT DISTRIBUTION TRANSFORMER  
**THREE PHASE**, UNDERGROUND KVA: 500  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 277/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

16. PADMOUNT DISTRIBUTION TRANSFORMER  
**THREE PHASE**, UNDERGROUND KVA: 1000  
PRIMARY VOLTAGE 7620/13200 Wye  
SECONDARY VOLTAGE 277/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

MANUFACTURER SHALL SUBMIT THE "GUARANTEED LOSSES" PER ANSI C57.12.00-1980

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17. PADMOUNT DISTRIBUTION TRANSFORMER  
**THREE PHASE**, UNDERGROUND KVA: 1500  
 PRIMARY VOLTAGE 7620/13200 Wye  
 SECONDARY VOLTAGE 277/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

18. PADMOUNT DISTRIBUTION TRANSFORMER  
**THREE PHASE**, UNDERGROUND KVA: 2500  
 PRIMARY VOLTAGE 7620/13200 Wye  
 SECONDARY VOLTAGE 277/480

MFG. AND MODEL BID \_\_\_\_\_ \$ \_\_\_\_\_ EA.

PERFORMANCE DATA:

A.	IMPEDANCE (%)	
B.	GUARANTEED NO LOAD LOSSES IN WATTS	
C.	GUARANTEED FULL LOAD WINDING LOSSES AT 85 DEGREE C IN WATTS	
D.	GUARANTEED TOTAL LOSSES AT 85 DEGREE C IN WATTS (B + C)	

MANUFACTURER SHALL SUBMIT THE "GUARANTEED LOSSES" PER ANSI C57.12.00-1980

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## Standard Terms and Conditions

1. **BILLING:** All goods or services must be billed to the City of Piqua and at prices not exceeding those stated on the purchase order. If prices or terms do not agree with your quotation, you must notify the Purchasing Department within three business days or your disagreement is waived.
2. **INVOICE:** Prepayment or progress payments are not permitted unless prior permission is obtained from the Finance Department. All invoices are to be in duplicate and are to be mailed to the Finance Department and shall reference the City's purchase order number. Failure to include the purchase order number may prevent timely payment. Each purchase order must be invoiced separately. Unless specified otherwise, the invoice will only be paid upon completion of the order.
3. **CASH DISCOUNTS:** All cash discount terms will be effective from date of actual receipt and acceptance of the items purchased, or receipt of correct and acceptable invoice, whichever is later.
4. **FREIGHT: NO COLLECTION FREIGHT SHIPMENTS WILL BE ACCEPTED.** All quotations are solicited on a "delivered price" basis. When, in rare instances, the City accepts a quotation not including all shipping charges, your claim for reimbursement, must be itemized on the invoice and supported with a copy of the original freight bill.
5. **TAXES:** The City of Piqua is exempt from payment of Federal excise taxes and State retail sales taxes. Our Federal Excise Tax Exemption Certificate Number is 31-6000136. You are responsible for all Social Security taxes and Workers' Compensation contributions for yourself or any of your employees.
6. **DELIVERIES:** All deliveries on this order must be in full accordance with specifications, properly identified with the purchase order number and must not exceed the quantities specified.
7. **CANCELLATION:** The City of Piqua reserves the right to cancel this order by written notice if you do not fulfill your contractual obligations with respect to timeliness, quality and/or any other reason.
8. **DEFAULT PROVISIONS:** In case of your default, the City of Piqua may procure the items from other sources and hold you responsible for any excess costs occasioned thereby and any other damages permitted by law, if you have been notified in writing by the City of Piqua you are in default and you have failed to cure the default within the time specified.
9. **NO VERBAL AGREEMENTS:** The City of Piqua will be bound only by the terms and conditions of this order, and will not be responsible for verbal agreements made by any officer or employee of the City of Piqua.
10. **PATENT AND COPYRIGHT INFRINGEMENT:** It is hereby understood (and by acceptance of this order) you agree to defend, indemnify and save harmless the City of Piqua, Ohio, its officers, agents and employees from any and all loss, costs or expense on account of any claim, suit or judgment as a result of, caused by, or incident to any patent, copyright or trademark infringement and/or royalty, actual or claimed, because of the use or disposition by said City of any article enumerated on this order and sold to said City pursuant to this order.
11. **INSPECTION:** The City of Piqua may inspect the items ordered hereunder during their manufacture, construction and/or preparation at reasonable times and shall have the right to inspect such items at the time of their delivery and/or completion. Items furnished hereunder may at any time be rejected for defects revealed by inspection, analysis, or by manufacturing operations or use after delivery even though such items may have previously been inspected and accepted. Such rejected items may be returned to you for full refund to City of Piqua including shipping and transportation charges.
12. **WARRANTY:** You warrant that the items and their production or completion shall not violate any federal, state or local laws, regulations or orders. You warrant all items delivered hereunder to be free from defects of material or workmanship, to be good quality, and to conform strictly to any specifications, drawings or samples which may have been specified or furnished by the City of Piqua, and you further warrant that you have good title to the items free and clear of all liens and encumbrances and will transfer such title to the City of Piqua. Said warranties shall not negate nor limit any implied warranties of merchantability or fitness. This warranty shall survive any inspection, delivery, acceptance or payment by the City of Piqua.
13. **RISK OF LOSS:** Title and risk of loss to and with respect to the items shall remain with you until the items in a complete state have been delivered to and accepted by the City of Piqua or to an agent or consignee duly designated by the City of Piqua at the location specified on the face hereof, items which are to be shipped shall be shipped F.O.B. destination unless otherwise specified by the City of Piqua. A packing slip must accompany each such shipment and if a shipment is to a consignee or an agent of the City of Piqua, a copy of the packing slip shall be forwarded concurrently to the City of Piqua. If no such packing slip is sent, the count or weight by the City of Piqua or its agent or consignee is agreed to be final and binding on you with respect to such shipment.
14. **SAVE HARMLESS:** You shall indemnify and hold the City of Piqua, its agents, consignees, employees, and representatives harmless from and against all expenses, damages, claims, suits, or liabilities (including attorney's fees of the City of Piqua) of every kind whatsoever by reason of, arising out of, or in any way connected with, accidents, occurrences, injuries or losses to or any person or property which may occur before or after acceptance of the completed items by the City of Piqua upon or about in any way due to resulting from, in whole or in part, the preparation, manufacture, construction, completion, and/or delivery of the items, including such as are caused by your

- subcontractors and excluding only such as are caused by the sole negligence of the City of Piqua other than where the City of Piqua's negligence consists of its failure to discover a condition caused or permitted to exist by you or any subcontractor of yours.
15. **INSURANCE:** If requested by the City of Piqua, you shall maintain policies of liability insurance such types and such amounts and with such companies as may be designated by the City of Piqua, which policies shall be written so as to protect the City of Piqua and you from the risks enumerated in Section 14. Such policies of insurance shall not be cancelable except upon thirty (30) days written notice to the City of Piqua and proof of such insurance shall be furnished by you to the City of Piqua. In addition, such policies shall protect all your subcontractors. You agree to make prompt written report to the insurance company involved of all accidents, occurrences, injuries or losses which may occur and of any and all claims made against the persons insured under said policies of insurance and to send copies of such reports to the City of Piqua within twenty-four (24) hours of the time that you obtained knowledge of the occurrence thereof.
  16. **SPECIFICATIONS CONFIDENTIAL:** Any document marked confidential or proprietary, received from The City of Piqua, shall not be released by the Company prior to the City's consent that the information to be released is disclosable and/or a public record. The City shall receive immediate notice of any other document disclosed by the Company.
  17. **EXAMINATION OF PREMISES:** If work is to be performed hereunder on the premises of the City of Piqua, you represent that you have examined the premises and any specifications or other documents furnished in connection with the items and that you have satisfied yourself as to the condition of the premises and site and agrees that no allowance shall be made in respect of any error as to such on your part.
  18. **CLEANING OF PREMISES:** If work is to be performed hereunder on the premises of the City of Piqua, you shall at all times keep the premises free from accumulation of waste material or rubbish. At the completion of the items you shall leave the premises and the items broom-clean.
  19. **EQUAL EMPLOYMENT OPPORTUNITY:**
    - (a) You agree that you will not discriminate against any employee or applicant for employment because of race, color, religion, sex, ancestry, national origin, place of birth, age, marital status, or handicap with respect to employment, upgrading promotion, or transfer, recruitment or recruitment advertising, lay-off determination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
    - (b) It is expressly agreed and understood by you that Section 19 (a) constitutes a material condition of this contract as fully as specifically rewritten herein, also that failure to comply therewith shall constitute a breach thereof entitling the City to terminate the contract at its option.
  20. **AGREEMENT TO BE EXCLUSIVE:** This purchase order contains the entire agreement between the parties and supersedes all other oral agreements only when there is no executed contract between the parties. The parties acknowledge and agree that neither of them has made any representation with respect to the subject matter of this purchase order or any representation inducing the execution and delivery of this purchase order, except such representations as are specifically set forth here, and each party acknowledges that it has relied on these representations in connection with its dealings with the other.
  21. **GOVERNING LAW:** This purchase order, the performance under it, and all suits and special proceedings under it, shall be construed in accordance with the laws of the State of Ohio. In any action, special proceeding or other proceeding that may be brought arising out of, in connection with, or by reason of this agreement, the laws of the State of Ohio shall be applicable and shall govern to the exclusion of the laws of any other forum, without regard to the jurisdiction in which the action or special proceeding may be instituted.
  22. **ADDITIONAL RIGHTS:** Any rights or remedies granted to the City of Piqua in any part of this purchase order shall not be exclusive of, but shall be in addition to, any other rights or remedies granted in another part of this purchase order and any other rights or remedies that the City of Piqua may have at law or in equity in any such instance. Any litigation arising from disputes herein shall be instituted only in Miami County, Ohio.
  23. **GOVERNING DOCUMENT:** Should there be any conflict between the terms of the executed contract and this purchase order, the terms of the contract govern.
  24. **INDEPENDENT CONTRACTOR:** The contractor, his assigns, heirs, successors, employees and any and all subcontractors are independent contractors and are not agents and/or employees of the City of Piqua.

## DETAILED SPECIFICATIONS

### GENERAL

The Contractor for this section shall carefully read the Standard Terms and Conditions, General Conditions and Special Conditions which, with the following specifications, shall govern all work under this heading. The Contractor shall carefully read and study other sections of the specifications so as to be aware of the full implications and requirements of the project. Bids will not be accepted on transformers from either Cooper Power Systems or Pauwels Transformers.

### SCOPE

The manufacturer or supplier under this contract shall deliver to the City of Piqua, Ohio all major items or equipment as described in these specifications.

Each of the major items of equipment is separately described under Item Numbers in this section of the specifications.

The manufacturer or supplier shall be responsible for delivery of the equipment to the City of Piqua, Ohio at the construction site or storage area.

### DISTRIBUTION TRANSFORMERS, SINGLE AND THREE PHASE

The distribution transformers to be provided under this contract are to be Class A or Padmounts as specified in Section 1 and have the following characteristics:

#### **Class A (ANSI specific)**

- Type: Single Phase
- Design: ANSI Specific oil filled
- High Voltage: As Specified
- High Voltage Taps: Not Required
- High Voltage Fuse: Not Required
- High Voltage Bushings: Two (2) cover mounted BIL 95 kV with #8 to #2 clamp type connector
- High Voltage Lightning Arrestors: Not Required
- Tank Ground Connectors: One (1) clamp type
- Low Voltage Bushings: Three (3) wall mounted with removable grounding link clamped to outside of tank
- Low Voltage: As Specified
- Low Voltage Breaker: Not Required
- Red Signal Lamp: Not Required
- Overload Reset: Not Required
- Pressure Relief Device: Required
- Mounting Brackets: One (1) pole type

## **Padmounts**

- Type: Three Phase or Single Phase as specified
- Design: ANSI Specific, Oil Filled
- High Voltage: As specified
- High Voltage Taps: Not Required
- High Voltage Fuse: Bay-O-Net (Provide Both Appropriately Sized Fuses for Dual-Volt Transformers)
- High Voltage Bushings: Load Break bushings and inserts, dead front, loop feed
- High Voltage Lightning Arrestors: Not Required
- Low Voltage Bushings:
  - Three Phase - NEMA six hole spades
  - Single Phase - UTILCO PTF6-500CU-SL installed on 1"-14 threaded studs
  - Insulated bushing supports required on all 750 kVA and larger units.
- Low Voltage: As specified
- Low Voltage Breaker: Not required
- Red Signal Lamp: Not required
- Overload Reset: Not required
- Pressure Relief Device: Required
- Tank Design:
  - Single Phase Requires Removable Lid
  - Three Phase Top and Sides are Required to be Hinged

## TRANSFORMER BID EVALUATION

The transformer bids will be used to determine the total cost to purchase and operate the unit over a twenty-five year estimated life. The quoted initial unit cost, along with performance data supplied by the vendor/manufacturer will be used to determine a total present value cost for each unit quoted. Assuming all else being equal (quality record, conformance to specs, etc.), the lowest cost unit, using the total present value method will be procured. If requested, a copy of the spreadsheet analysis will be supplied by the City of Piqua to participating vendor/manufacturers. The assumptions and calculations for this transformer bid evaluation analysis follows:

### Assumptions

1. The transformer hours (H) of operation will be twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year or 8,760 hours annually.
2. The transformer load factor (LF) will initially be 60% of rated load and increase incrementally by 1% annually until the transformer is 85% loaded.
3. The evaluation period will be twenty-five (25) years.
4. The electric rate (E) will be 5.2 cents per kilowatt hour and the annual increase in the rate will be 2.5 percent.
5. The interest rate (I) will be 5.75 percent per year and will remain constant during the time period evaluated.

### Calculations

Using the assumptions listed above, the following formulas will be used to evaluate the transformer as bid in the proposal section of these specifications. As previously stated, it is the intent of the City of Piqua to award the contract based on the lowest total present value cost of ownership of the transformer.

As calculated by the City of Piqua, the total present value cost is the summation of the present value annual costs. The present value annual cost (PVAC) is calculated as:

$$PVAC = (Annual\ Cost) * (1 + I)^{-Y}$$

Y = year being evaluated (1 through evaluation period)

The Annual Cost is the yearly summation of:

- 1) Annual investment cost or P
- 2) Annual cost of no-load losses (core losses) or CL
- 3) Annual cost of load losses (winding losses) or WL

or,

$$ANNUAL\ COST = P + CL + WL$$

$$P = BID\ PRICE * \frac{I}{1 - (1 + I)^{-Y}}$$

$$CL = CORE\ LOSSES\ (kW) * E * H$$

$$WL = Winding\ Losses\ (kW\ @\ 85\ degrees\ C) * E * (LF)^2 * H$$

It is the responsibility of the bidder to accurately complete the transformer proposal form when submitting a bid to allow for proper evaluation of the bid by The City of Piqua.

## TESTS

Copies of certified test reports shall be submitted upon completion of tests for each transformer. These tests shall be made in accordance with the most recent revision of the ANSI Standard Test Code for transformers assembled in its own case, filled with oil and with bushings and accessories installed.

The tests shall include:

1. Winding resistance measurement
2. Exciting current measurement
3. Impedance measurement
4. No load loss measurement
5. Load loss measurement

## Non-PCB Certification

1. Only Non-PCB transformer oil shall be used.
2. The nameplate shall be permanently marked to show that the transformer is Non-PCB at the time of manufacture.

## Delivery

All transformers over 2,000 pounds shall be delivered on an open flatbed truck or trailer. Deliveries will be accepted between the hours of 7:30 a.m. and 2:00 p.m., Monday through Friday only.