CITY OF AUSTIN, TEXAS

Purchasing Office

INVITATION FOR BID (IFB)

OFFER SHEET

SOLICITATION NO: GGU0160

DATE ISSUED: JUNE 27, 2016

REQUISITION NO.: RQM-1100-16020200239

COMMODITY CODE: 28586

FOR CONTRACTUAL AND TECHNICAL ISSUES CONTACT THE FOLLOWING AUTHORIZED CONTACT PERSON:

GABRIEL GUERRERO
BUYER II
Phone: (512) 322-6060
E-Mail: gabriel.guerrero@austinenergy.com

COMMODITY/SERVICE DESCRIPTION: NETWORK TRANSFORMERS ANNUAL PRICE AGREEMENT

PRE-BID CONFERENCE TIME AND DATE: N/A

LOCATION: N/A

BID DUE PRIOR TO: 2:00 PM ON JULY 19, 2016

BID OPENING TIME AND DATE: 2:15 PM JULY 19, 2016

LOCATION: MUNICIPAL BUILDING, 124 W 8th STREET RM 308, AUSTIN, TEXAS 78701

LIVE BID OPENING ONLINE:

For information on how to attend the Bid Opening online, please select this link:

http://www.austintexas.gov/department/bid-opening-webinars

When submitting a sealed Offer and/or Compliance Plan, use the proper address for the type of service desired, as shown below:

Address for US Mail (Only)	**Address for Fedex, UPS, Hand Delivery or Courier**
City of Austin	City of Austin, Municipal Building
Purchasing Office-Response Enclosed for Solicitation # GGU0160	Purchasing Office-Response Enclosed for Solicitation # GGU0160
P.O. Box 1088	124 W 8th Street, Rm 308
Austin, Texas 78767-8845	Austin, Texas 78701
	Reception Phone: (512) 974-2500

NOTE: Offers must be received and time stamped in the Purchasing Office prior to the Due Date and Time. It is the responsibility of the Offeror to ensure that their Offer arrives at the receptionist's desk in the Purchasing Office prior to the time and date indicated. Arrival at the City's mailroom, mail terminal, or post office box will not constitute the Offer arriving on time. See Section 0200 for additional solicitation instructions.

All Offers (including Compliance Plans) that are not submitted in a sealed envelope or container will not be considered.

The Vendor agrees, if this Offer is accepted within 120 calendar days after the Due Date, to fully comply in strict accordance with the Solicitation, specifications and provisions attached thereto for the amounts shown on the accompanying Offer.

SUBMIT 1 ORIGINAL, 1 COPY AND 1 ELECTRONIC COPY OF YOUR RESPONSE

*****SIGNATURE FOR SUBMITTAL REQUIRED ON PAGE 3 OF THIS DOCUMENT*****

This solicitation is comprised of the following required sections. Please ensure to carefully read each section including those incorporated by reference. By signing this document, you are agreeing to all the items contained herein and will be bound to all terms.

SECTION NO.	TITLE	PAGES
0100	STANDARD PURCHASE DEFINITIONS	*
0200	STANDARD SOLICITATION INSTRUCTIONS	*
0300	STANDARD PURCHASE TERMS AND CONDITIONS	*
0400	SUPPLEMENTAL PURCHASE PROVISIONS	9
0500	SPECIFICATIONS E-708 AND E-709	17
0600	BID SHEET – Must be completed and returned with Offer	5
0605	LOCAL BUSINESS PRESENCE IDENTIFICATION FORM – Complete & return	2
0700	REFERENCE SHEET – Complete and return if required	1
0800	NON-DISCRIMINATION CERTIFICATION	*
0805	NON-SUSPENSION OR DEBARMENT CERTIFICATION	*
0810	NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING CERTIFICATION	*
0835	NONRESIDENT BIDDER PROVISIONS – Complete & return	1
0900	MBE/WBE PROCUREMENT PROGRAM PACKAGE NO GOALS FORM – Complete & return	2

*** Documents are hereby incorporated into this Solicitation by reference, with the same force and effect as if they were incorporated in full text. The full text versions of the * Sections are available on the Internet at the following online address:**

http://www.austintexas.gov/financeonline/vendor_connection/index.cfm#STANDARDBIDDOCUMENTS

If you do not have access to the Internet, you may obtain a copy of these Sections from the City of Austin Purchasing Office located in the Municipal Building, 124 West 8th Street, Room #308 Austin, Texas 78701; phone (512) 974-2500. Please have the Solicitation number available so that the staff can select the proper documents. These documents can be mailed, expressed mailed, or faxed to you.

INTERESTED PARTIES DISCLOSURE

In addition, Section 2252.908 of the Texas Government Code requires the successful offeror to complete a Form 1295 "Certificate of Interested Parties" that is signed and notarized for a contract award requiring council authorization. The "Certificate of Interested Parties" form must be completed on the Texas Ethics Commission website, printed, signed and submitted to the City by the authorized agent of the Business Entity with acknowledgment that disclosure is made under oath and under penalty of perjury prior to final contract execution.

https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: _____

Company Address: _____

City, State, Zip: _____

Federal Tax ID No. _____

Printed Name of Officer or Authorized Representative: _____

Title: _____

Signature of Officer or Authorized Representative: _____

Date: _____

Email Address: _____

Phone Number: _____

*** Completed Bid Sheet, section 0600 must be submitted with this Offer Sheet to be considered for award**

Section 0605: Local Business Presence Identification

A firm (Offeror or Subcontractor) is considered to have a Local Business Presence if the firm is headquartered in the Austin Corporate City Limits, or has a branch office located in the Austin Corporate City Limits in operation for the last five (5) years, currently employs residents of the City of Austin, Texas, and will use employees that reside in the City of Austin, Texas, to support this Contract. The City defines headquarters as the administrative center where most of the important functions and full responsibility for managing and coordinating the business activities of the firm are located. The City defines branch office as a smaller, remotely located office that is separate from a firm's headquarters that offers the services requested and required under this solicitation.

OFFEROR MUST SUBMIT THE FOLLOWING INFORMATION FOR EACH LOCAL BUSINESS (INCLUDING THE OFFEROR, IF APPLICABLE) TO BE CONSIDERED FOR LOCAL PRESENCE.

NOTE: ALL FIRMS MUST BE IDENTIFIED ON THE MBE/WBE COMPLIANCE PLAN OR NO GOALS UTILIZATION PLAN (REFERENCE SECTION 0900).

USE ADDITIONAL PAGES AS NECESSARY

OFFEROR:

Name of Local Firm		
Physical Address		
Is your headquarters located in the Corporate City Limits? (circle one)	Yes	No
or		
Has your branch office been located in the Corporate City Limits for the last 5 years?		
Will your business be providing additional economic development opportunities created by the contract award? (e.g., hiring, or employing residents of the City of Austin or increasing tax revenue?)	Yes	No

SUBCONTRACTOR(S):

Name of Local Firm		
Physical Address		
Is your headquarters located in the Corporate City Limits? (circle one)	Yes	No
or		
Has your branch office been located in the Corporate City Limits for the last 5 years	Yes	No

Will your business be providing additional economic development opportunities created by the contract award? (e.g., hiring, or employing residents of the City of Austin or increasing tax revenue?)	Yes	No

SUBCONTRACTOR(S):

Name of Local Firm		
Physical Address		
Is your headquarters located in the Corporate City Limits? (circle one)	Yes	No
or		
Has your branch office been located in the Corporate City Limits for the last 5 years	Yes	No
Will your business be providing additional economic development opportunities created by the contract award? (e.g., hiring, or employing residents of the City of Austin or increasing tax revenue?)	Yes	No

Section 0700: Reference Sheet

Responding Company Name _____

The City at its discretion may check references in order to determine the Offeror's experience and ability to provide the products and/or services described in this Solicitation. The Offeror shall furnish at least 3 complete and verifiable references. References shall consist of customers to whom the offeror has provided the same or similar services within the last 5 years. References shall indicate a record of positive past performance.

1. Company's Name _____

   Name and Title of Contact _____

   Project Name _____

   Present Address _____

   City, State, Zip Code _____

   Telephone Number (_____)_____ Fax Number (_____)_____

   Email Address _____

2. Company's Name _____

   Name and Title of Contact _____

   Project Name _____

   Present Address _____

   City, State, Zip Code _____

   Telephone Number (_____)_____ Fax Number (_____)_____

   Email Address _____

3. Company's Name _____

   Name and Title of Contact _____

   Project Name _____

   Present Address _____

   City, State, Zip Code _____

   Telephone Number (_____)_____ Fax Number (_____)_____

   Email Address _____

Section 0835: Non-Resident Bidder Provisions

Company Name _____

A. Bidder must answer the following questions in accordance with Vernon's Texas Statues and Codes Annotated Government Code 2252.002, as amended:

   Is the Bidder that is making and submitting this Bid a "Resident Bidder" or a "non-resident Bidder"?

   Answer: _____

   (1) Texas Resident Bidder- A Bidder whose principle place of business is in Texas and includes a Contractor whose ultimate parent company or majority owner has its principal place of business in Texas.
   (2) Nonresident Bidder- A Bidder who is not a Texas Resident Bidder.

B. If the Bidder id a "Nonresident Bidder" does the state, in which the Nonresident Bidder's principal place of business is located, have a law requiring a Nonresident Bidder of that state to bid a certain amount or percentage under the Bid of a Resident Bidder of that state in order for the nonresident Bidder of that state to be awarded a Contract on such bid in said state?

   Answer: _____ Which State: _____

C. If the answer to Question B is "yes", then what amount or percentage must a Texas Resident Bidder bid under the bid price of a Resident Bidder of that state in order to be awarded a Contract on such bid in said state?

   Answer: _____

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	GGU0160
PROJECT NAME:	NETWORK TRANSFORMERS ANNUAL PRICE AGREEMENT

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No	____	**If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**
Yes	____	**If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Company Name	
Name and Title of Authorized Representative (Print or Type)	
Signature	**Date**

Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Utilization Plan
(Please duplicate as needed)

SOLICITATION NUMBER:	GGU0160
PROJECT NAME:	NETWORK TRANSFORMERS ANNUAL PRICE AGREEMENT

PRIME CONTRACTOR / CONSULTANT COMPANY INFORMATION

Name of Contractor/Consultant			
Address			
City, State Zip			
Phone Number		Fax Number	
Name of Contact Person			
Is Company City certified?	Yes ☐ No ☐ MBE ☐ WBE ☐ MBE/WBE Joint Venture ☐		

I certify that the information included in this No Goals Utilization Plan is true and complete to the best of my knowledge and belief. I further understand and agree that the information in this document shall become part of my Contract with the City of Austin.

Name and Title of Authorized Representative (Print or Type)

Signature **Date**

Provide a list of all proposed subcontractors / sub-consultants / suppliers that will be used in the performance of this Contract.
Attach Good Faith Effort documentation if non MBE/WBE firms will be used.

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code:		☐ Non-Certified
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code:		☐ Non-Certified
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

FOR SMALL AND MINORITY BUSINESS RESOURCES DEPARTMENT USE ONLY:

Having reviewed this plan, I acknowledge that the proposer (HAS) or (HAS NOT) complied with City Code Chapter 2-9A/B/C/D, as amended.

Reviewing Counselor _____ **Date** _____ **Director/Deputy Director** _____ **Date** _____

CITY OF AUSTIN
PURCHASING OFFICE
SUPPLEMENTAL PURCHASE PROVISIONS
(IFB GGU0160)

The following Supplemental Purchasing Provisions apply to this solicitation:

1. **EXPLANATIONS OR CLARIFICATIONS:** (reference paragraph 5 in Section 0200)

   All requests for explanations or clarifications must be submitted in writing to the Purchasing Office not later than (5) calendar days prior to bid opening. Submissions may be made via e-mail to: gabriel.guerrero@austinenergy.com or via fax at (512) 322-6580

2. **BID EVALUATION AND AWARD**

   A. This contract shall be awarded to the Bidder with the lowest evaluated cost to the City as determined by the formula stated in Specifications E-708 & E-709 (Section 6.0); however, the contract will be awarded in an annual estimated not-to-exceed amount equal to the total bid, not the total evaluated bid.

   B. All Offerors shall include pricing having no more than two (2) decimal places. The City will drop any decimal places in excess of two (2) to meet the two (2) decimal requirement.

3. **INSURANCE:** Insurance is required for this solicitation.

   A. **General Requirements:** See Section 0300, Standard Purchase Terms and Conditions, paragraph 32, entitled Insurance, for general insurance requirements.

      i. The Contractor shall provide a Certificate of Insurance as verification of coverages required below to the City at the below address prior to contract execution and within 14 calendar days after written request from the City. Failure to provide the required Certificate of Insurance may subject the Offer to disqualification from consideration for award
      ii. The Contractor shall not commence work until the required insurance is obtained and until such insurance has been reviewed by the City. Approval of insurance by the City shall not relieve or decrease the liability of the Contractor hereunder and shall not be construed to be a limitation of liability on the part of the Contractor.
      iii. The Contractor must also forward a Certificate of Insurance to the City whenever a previously identified policy period has expired, or an extension option or holdover period is exercised, as verification of continuing coverage.
      iv. The Certificate of Insurance, and updates, shall be mailed to the following address:

      City of Austin Purchasing Office
      Attn: Gabriel Guerrero (All City Contracts)
      721 Barton Springs Road
      Austin, Texas 78704

   B. **Specific Coverage Requirements:** The Contractor shall at a minimum carry insurance in the types and amounts indicated below for the duration of the Contract, including extension options and hold over periods, and during any warranty period. These insurance coverages are required minimums and are not intended to limit the responsibility or liability of the Contractor.

      i. **Worker's Compensation and Employers' Liability Insurance:** Coverage shall be consistent with statutory benefits outlined in the Texas Worker's Compensation Act (Section 401). The minimum policy limits for Employer's Liability are $100,000 bodily injury each accident, $500,000 bodily injury by disease policy limit and $100,000 bodily injury by disease each employee.

(1) The Contractor's policy shall apply to the State of Texas and include these endorsements in favor of the City of Austin:
   (a) Waiver of Subrogation, Form WC420304, or equivalent coverage
   (b) Thirty (30) days Notice of Cancellation, Form WC420601, or equivalent coverage

ii. **Commercial General Liability Insurance:** The minimum bodily injury and property damage per occurrence are $500,000 for coverages A (Bodily Injury and Property Damage) and B (Personal and Advertising Injury).
   (1) The policy shall contain the following provisions:
      (a) Contractual liability coverage for liability assumed under the Contract and all other Contracts related to the project.
      (b) Contractor/Subcontracted Work.
      (c) Products/Completed Operations Liability for the duration of the warranty period.
      (d) If the project involves digging or drilling provisions must be included that provide Explosion, Collapse, and/or Underground Coverage.
   (2) The policy shall also include these endorsements in favor of the City of Austin:
      (a) Waiver of Subrogation, Endorsement CG 2404, or equivalent coverage
      (b) Thirty (30) days Notice of Cancellation, Endorsement CG 0205, or equivalent coverage
      (c) The City of Austin listed as an additional insured, Endorsement CG 2010, or equivalent coverage

iii. **Business Automobile Liability Insurance:** The Contractor shall provide coverage for all owned, non-owned and hired vehicles with a minimum combined single limit of $500,000 per occurrence for bodily injury and property damage. Alternate acceptable limits are $250,000 bodily injury per person, $500,000 bodily injury per occurrence and at least $100,000 property damage liability per accident.
   (1) The policy shall include these endorsements in favor of the City of Austin:
      (a) Waiver of Subrogation, Endorsement CA0444, or equivalent coverage
      (b) Thirty (30) days Notice of Cancellation, Endorsement CA0244, or equivalent coverage
      (c) The City of Austin listed as an additional insured, Endorsement CA2048, or equivalent coverage.

C. **Endorsements:** The specific insurance coverage endorsements specified above, or their equivalents must be provided. In the event that endorsements, which are the equivalent of the required coverage, are proposed to be substituted for the required coverage, copies of the equivalent endorsements must be provided for the City's review and approval.

4. **TERM OF CONTRACT:**

A. The Contract shall be in effect for an initial term of twenty-four (24) months and may be extended thereafter for up to three (3) additional twelve (12) month periods, subject to the approval of the Contractor and the City Purchasing Officer or his designee.

B. Upon expiration of the initial term or period of extension, the Contractor agrees to hold over under the terms and conditions of this agreement for such a period of time as is reasonably necessary to re-solicit and/or complete the project (not to exceed 120 days unless mutually agreed on in writing).

C. Upon written notice to the Contractor from the City's Purchasing Officer or his designee and acceptance of the Contractor, the term of this contract shall be extended on the same terms and conditions for an additional period as indicated in paragraph A above.

D. Prices are firm and fixed for the first twelve (12) months. Thereafter, price changes are subject to the Economic Price Adjustment provisions of this Contract.

5. **QUANTITIES:** The quantities listed herein are estimates for the period of the Contract. The City reserves the right to purchase more or less of these quantities as may be required during the Contract term. Quantities will be as needed and specified by the City for each order. Unless specified in the solicitation, there are no minimum order quantities.

6. **DELIVERY REQUIREMENTS:** Delivery sites shall include but are not limited to:

Delivery Locations:	Receiving Hours:
City of Austin - Austin Energy Decker Steel Yard 10001 Decker Lane Austin, TX 78724	Monday through Thursday Hours: 8:00 am to 3:00 pm

A. Delivery is to be made within the delivery time specified by the awarded contractor. All orders must be shipped complete unless arrangements for partial shipments are made in advance.

B. The Contractor shall provide, with each delivery, a Shipping or Delivery Ticket showing the description of each item, quantity, and unit price.

C. The Contractor shall contact Gregory Friske at (512) 505-3853 or Gregory.Friske@austinenergy.com to confirm the quantity to be shipped on all orders within two (2) hours of notification.

D. The Contractor shall contact Gregory Friske to schedule delivery no less than 72 hours prior to delivery.

E. Unless requested by the City, deliveries shall not be made on City-recognized legal holidays (see paragraph 51 in Section 0300).

7. **DELIVERY PERFORMANCE**

A. The City will monitor Vendor's delivery performance by noting and recording Vendors' order receipt dates ("Receipt Date"), and comparing them with Vendor quoted delivery dates ("Delivery Date") in accordance with the information provided at the time of order or the requirements of this Contract; this information will be compiled quarterly into a report ("Report"). The City will monitor Vendor's delivery performance at random and provide a formal Report to the Vendor at the end of each calendar quarter ("Vendor Performance Review").

B. Each order will be scored as follows: The sum of the:

$$\frac{\text{Number of orders received on time}}{\text{Total number of orders received}} = \%\ \text{On-Time ("\% On-Time")}$$

For this proposed Contract the Goal shall be 95% On-Time. For example: if, during the month of July, 72 orders were received on-time, and 2 other orders were delivered late then the % On-Time is the quotient of the number of orders delivered on-time divided by the total number of orders delivered. In this example the Goal is 95%. The math is: 72 (orders delivered on-time)/(72 + (2 orders delivered late) = 74 total orders delivered), or 72/74 equals 97%. Since 97% is greater than this example's Goal of 95%, this month's deliveries meet the Contract Requirements.

C. Request for correction. Vendor may request a correction to a Report based on a perceived discrepancy in an/multiple order(s). Such requests must be issued in writing within (7) seven calendar days after email release to Vendor of the most recent Vendor Performance Review. The request shall include credible documentation, such as a proof of delivery, substantiating Vendor's claims. Correction requests should be emailed to the person listed as the Contract Manager named in these 0400s and may be copied to the Buyer and or the person who sent or presented the Vendor Performance Review. City will review and make corrections to the Report as appropriate.

8. **INVOICES and PAYMENT:** (reference paragraphs 12 and 13 in Section 0300)

A. Invoices shall contain a unique invoice number and the information required in Section 0300, paragraph 12, entitled "Invoices." Invoices received without all required information cannot be processed and will be returned to the vendor.

Invoices shall be mailed to the below address:

	CITY OF AUSTIN
Department	AUSTIN ENERGY
Attn:	PAYMENT SECTION
Address	P.O. BOX 3546
City, State Zip Code	AUSTIN, TX. 78764

B. The Contractor agrees to accept payment by either check or Electronic Funds Transfer (EFT) for all goods and/or services provided under the Contract.

9. **WARRANTY:**

Warranty period shall be a minimum of eighteen months from the date of acceptance of deliverables and from the date of acceptance of any replacement deliverables or twelve months from the date of energizing. All other terms of the Warranty as stated in the Standard Purchase Terms and Conditions (Section 0300, paragraph 21) shall remain the same.

10. **MATERIALS SPECIFICATIONS/DESCRIPTIVE LITERATURE:**

A. If a solicitation refers to a Qualified Products List (QPL), Standard Products List (SPL) or a manufacturer's name and product, any Offeror offering products not referenced in the solicitation should submit as part of their Offer materials specifications/descriptive literature for the non-referenced product. Materials specifications/descriptive literature should be identified to show the item(s) in the Offer to which it applies.

B. Materials specifications/descriptive literature are defined as product manufacturer's catalog pages, "cut sheets" applicable tests results, or related detailed documents that specify material construction, performance parameters, and any industrial standards that are applicable such as ANSI, ASTM, ASME, SAE, NFPA, NBS, EIA, ESL, and NSA. The submitted materials specifications/descriptive literature should include the manufacturer's name and product number of the product being offered.

C. The failure of the materials specifications/descriptive literature to show that the product offered conforms to the requirements of the Solicitation shall result in rejection of the Offer.

D. Failure to submit the materials specifications/descriptive literature as part of the Offer may subject the Offer to disqualification from consideration for award.

E. Design drawings, which demonstrate compliance with City of Austin Specifications, should be submitted with the bid (One original and two copies).

F. Engineered Drawings, signed and sealed by a registered Professional Engineer, shall be sent within two (2) weeks of Contract award to the following address (2 copies):

	City of Austin
Department	Austin Energy, New Service Delivery, Standards Section
Attention	**Michael Pittman** **512- 505-7678** **Email: michael.pittman@austinenergy.com**
Address	4411 Meinardus Drive
City, State Zip Code	Austin, Texas 78744

11. **DRAWINGS AND TEST REPORTS:**

The following information shall be sent to the New Service Delivery, Standards Section Contact listed in 10.F:

A. The Contractor shall provide two (2) sets of drawings for approval prior to beginning manufacture of the transformers.

B. For each transformer delivered the Contractor shall furnish, bound in a lightweight folder suitable for filing and reference, three (3) copies of the following.

i. Complete nameplate data with the date of manufacture.

ii. Outline drawings of the complete transformer.

iii. High side and low voltage side drawings.

iv. Certified transformer test report with the following information.

a. City of Austin Purchase order number

b. Excitation losses, corrected to 20 º C

c. Winding losses, corrected to 85º C

d. Total Losses

e. Percent Impedance, corrected to 85º C

f. Excitation current

v. Complete set of instructions for installation, maintenance and operation of the transformer as well as a list of replacement parts.

12. **HAZARDOUS MATERIALS:**

A. If this Solicitation involves hazardous materials, the Offeror should furnish with the Offer Material Safety Data Sheets (MSDS), (OSHA Form 20), on all chemicals and hazardous materials specifying the generic and trade name of product, product specification, and full hazard information including receiving and storage hazards. Instructions, special equipment needed for handling, information on approved containers, and instructions for the disposal of the material are also required.

B. Failure to submit the MSDS as part of the Offer may subject the Offer to disqualification from consideration for award.

C. The MSDS, instructions and information required in paragraph "A" must be included with each shipment under the contract.

13. **NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING:**

A. On November 10, 2011, the Austin City Council adopted Ordinance No. 20111110-052 amending Chapter 2.7, Article 6 of the City Code relating to Anti-Lobbying and Procurement. The policy defined in this Code applies to Solicitations for goods and/or services requiring City Council approval under City Charter Article VII, Section 15 (Purchase Procedures). During the No-Contact Period, Offerors or potential Offerors are prohibited from making a representation to anyone other than the Authorized Contact Person in the Solicitation as the contact for questions and comments regarding the Solicitation.

B. If during the No-Contact Period an Offeror makes a representation to anyone other than the Authorized Contact Person for the Solicitation, the Offeror's Offer is disqualified from further consideration except as permitted in the Ordinance.

C. If an Offeror has been disqualified under this article more than two times in a sixty (60) month period, the Purchasing Officer shall debar the Offeror from doing business with the City for a period not to exceed three (3) years, provided the Offeror is given written notice and a hearing in advance of the debarment.

D. The City requires Offerors submitting Offers on this Solicitation to certify that the Offeror has not in any way directly or indirectly made representations to anyone other than the Authorized Contact Person during the No-Contact Period as defined in the Ordinance. The text of the City Ordinance is posted on the Internet at: http://www.ci.austin.tx.us/edims/document.cfm?id=161145

14. **ECONOMIC PRICE ADJUSTMENT:**

A. **Price Adjustments:** Prices shown in this Contract shall remain firm for the first twelve (12) months of the Contract. After that, in recognition of the potential for fluctuation of the Contractor's cost, a price adjustment (increase or decrease) may be requested by either the City or the Contractor on the anniversary date of the Contract or as may otherwise be specified herein. The percentage change between the contract price and the requested price shall not exceed the percentage change between the specified index in effect on the date the solicitation closed and the most recent, non-preliminary data at the time the price adjustment is requested. The requested price adjustment shall not exceed ten percent (10%) for any single line item and in no event shall the total amount of the contract be automatically adjusted as a result of the change in one or more line items made pursuant to this provision. Prices for products or services unaffected by verifiable cost trends shall not be subject to adjustment.

B. **Effective Date:** Approved price adjustments will go into effect on the first day of the upcoming renewal period or anniversary date of contract award and remain in effect until contract expiration unless changed by subsequent amendment.

C. **Adjustments:** A request for price adjustment must be made in writing and submitted to the other Party prior to the yearly anniversary date of the Contract; adjustments may only be considered at that time unless otherwise specified herein. Requested adjustments must be solely for the purpose of accommodating changes in the Contractor's direct costs. Contractor shall provide an updated price listing once agreed to adjustment(s) have been approved by the parties.

D. **Indexes:** In most cases an index from the Bureau of Labor Standards (BLS) will be utilized; however, if there is more appropriate, industry recognized standard then that index may be selected.

i. The following definitions apply:
   (1) **Base Period:** Month and year of the original contracted price (the solicitation close date).
   (2) **Base Price:** Initial price quoted, proposed and/or contracted per unit of measure.
   (3) **Adjusted Price:** Base Price after it has been adjusted in accordance with the applicable index change and instructions provided.
   (4) **Change Factor:** The multiplier utilized to adjust the Base Price to the Adjusted Price.
   (5) **Weight %:** The percent of the Base Price subject to adjustment based on an index change.

ii. **Adjustment-Request Review:** Each adjustment-request received will be reviewed and compared to changes in the index(es) identified below. Where applicable:
   (1) Utilize final Compilation data instead of Preliminary data
   (2) If the referenced index is no longer available shift up to the next higher category index.

iii. **Index Identification:** Complete table as they may apply.

Weight % or $ of Base Price: 100%	
Database Name: Producer Price Index Industry Data	
Series ID: WPU11740999	
☒ Not Seasonally Adjusted	☐ Seasonally Adjusted
Geographical Area: All	
Description of Series ID: WPU11740999 Machinery and equipment/Power and distribution transformers, excluding parts.	
This Index shall apply to the following items of the Bid Sheet / Cost Proposal: All	

E. **Calculation:** Price adjustment will be calculated as follows:

Single Index: Adjust the Base Price by the same factor calculated for the index change.

Index at time of calculation
Divided by index on solicitation close date
Equals Change Factor
Multiplied by the Base Rate
Equals the Adjusted Price

F. If the requested adjustment is not supported by the referenced index, the City, at its sole discretion, may consider approving an adjustment on fully documented market increases.

15. **MINIMUM MANUFACTURER QUALIFICATIONS:**

A. The Contractor shall have designed, fabricated, tested and delivered a minimum of twenty (20) transformers of the same basic ANSI/IEEE design as Offered to the City of Austin Electric Utility Department d/b/a Austin Energy (AE) with one winding being 35 kV or less in the past five (5) years at the transformer facility to be used to produce the transformers Offered to AE. No exceptions to this requirement will be considered.

B. The Contractor shall provide maintenance staff and a service facility located in North America for the duration of the warranty period. The Contractor shall state in the bid the locations of the maintenance staff and service facility. The Contractor shall maintain a complete and readily available inventory of spare parts during the warranty period. AE reserves the right to inspect the service facility prior to awarding a contract to ensure compliance with any requirements stated in this Solicitation.

C. The Contractor shall have a Quality Management System meeting the requirements an approved standard such as ISO-9001 or Buyer approved equivalent.

D. The Contractor shall design, build and test the transformers to be provided under this contract in accordance with ANSI C57 and AE Specifications E-708 (Section 6.0).

E. The Contractor shall be sufficiently financially stable to be able to provide AE with the products included in this Contract.

16. **CONTRACTOR QUALIFICATION AND BID AWARD PROCESS:**

A. The City will award to the lowest qualified Bid meeting the requirements of this Solicitation, including but not limited to the Specifications, Terms & Conditions, and the Bid Sheet. The apparent low bidder meeting the requirements of the Solicitation, may, at the City's option, be further evaluated to ensure compliance with the requirements of the Solicitation. The evaluation of the apparent low bidder will take place at the Bidder's manufacturing facility that will be used to produce the transformers Offered to the City. The evaluation will be conducted by a team of AE Engineers. The following criteria will be evaluated to verify compliance with ANSI C57, ISO-9001 (or Buyer approved equivalent), as well as any other requirements of this Solicitation:

i. Technical Organization
ii. Analytical Capability
iii. Manufacturing Facilities and Personnel
iv. Manufacturing Process
v. Test Facilities and Personnel
vi. Quality Control and Quality Assurance
vii. Record of Performance
viii. Repair Facility
ix. Field Service

B. AE will supply a detailed audit report based on the evaluation detailed in Part 15A above to the audited Bidder within ten (10) working days of evaluation.

C. If the apparent low Bidder passes the evaluation, the Bidder will be recommended for Contract Award. If the apparent low Bidder does not pass the evaluation, the next lowest Bidder meeting the requirements of the Solicitation, may, at the City's option, be further evaluated to ensure compliance with the requirements of the Solicitation. This process will continue until the lowest evaluated and qualified Bid is determined by the City.

17. **CONTRACT MANAGER:** The following person is designated as Contract Manager, and will act as the contact point between the City and the Contractor during the term of the Contract:

Name	Chet S Oszust, Jr. Contract Compliance Specialist Senior
Address	Austin Energy, Materials Management Section Town Lake Center, Room (400.1.42) 721 Barton Springs Road Austin, TX 78704
Contact Information	Phone Number: (512-322-6391) Fax Number: (512-322-6390) Email Address: (chester.oszust@austinenergy.com)

*Note: The above listed Contract Manager is not the authorized Contact Person for purposes of the **NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING Provision** of this Section; and therefore, contact with the Contract Manager is prohibited during the no contact period.

CITY OF AUSTIN - AUSTIN ENERGY (AE)

PURCHASE SPECIFICATION

FOR

TRANSFORMER, NTWK, VLT, 3PH, 500-2000 KVA, 12.47KV, 277/480Y

DATE	PREPARED BY	ISSUANCE/REVISION	APPROVAL PROCESS MANAGER/M&ESS MANAGER
05/29/97	Steve Booher	Revision	George Martinez / Peter Soosay
03/10/99	George Martinez	Revision	George Martinez / David Sloan
03/22/99	George Martinez	Revision	George Martinez / David Sloan
07/16/99	George Martinez	Revision	Carl Nance / George Martinez
03/04/05	Steven Booher	Revision	
06/27/11	Steven Booher	Revision	
10/16/15	Brantley Gosey	Revision	Michael Pittman
11/06/15	Dennis Patrick	Revision	Michael Pittman
03/10/16	Brantley Gosey	Revision	Michael Pittman
06/06/16	Brantley Gosey	Revision	

REASON FOR REVISION	*AFFECTED PARAGRAPHS*
03/10/99 - Change to 12.47 KV	Title change, remove 1.1.3, change ratings 1.2.2, Change BIL 1.2.4, remove contacts 3.3, add contacts 3.4, bushing 4.1, changed 4.3, added 4.9, changed losses and evaluation 7.1.
3/22/99 - Change LV throat requirements. Move General Requirements to Supplemental Terms and Conditions	Section 4.2, 6.0, 8.0, 9.0
07/16/99 - Network Transformer to include 2500 KVA, 480/277V	
Revised transformer ratings, Added sudden pressure Relay, Revised Evaluation	1.2.2, 4.2, 4.8
	1.2.2 , 3.7, 6.1
6/27/11 Add DOE requirement and revised loss requirements	3.8 and 6.1
10/16/15: Revise DOE requirement	3.8
11/06/15: Added Secondary Voltage Sticker	Section 7.0
03/10/16: Add primary network disconnect/grounding switch; changes for digital gauges and DGA indicator	Section 3.2-3.12
06/06/16: Added language from 09/2011 addendum	Section 3.5

This specification, until rescinded, shall apply to each future purchase and contract for the commodity described herein. Retain for future reference.

CITY OF AUSTIN- AUSTIN ENERGY (AE)
PURCHASE SPECIFICATION
FOR
TRANSFORMER, NTWK, VLT, 3PH, 500-2000 KVA, 12.47KV, 277/480Y

1.0 SCOPE AND CLASSIFICATION

1.1 Scope

1.1.1 This specification covers three-phase oil filled network type transformers.

1.1.2 No deviations from this specification will be permitted.

1.2 Classification

1.2.1 Voltage shall be 12,470 Volts delta, 480Y/277, or 216Y/125 Volts.

1.2.2 Transformer rating shall be 500, 750, and 1000 for 216Y/125 and 500, 750, 1000, 1500, and 2000 kVA for 480Y/277 as specified on bid request.

1.2.3 No-load high voltage taps shall be 5% below, 2 1/2% below, rated 2 1/2% above, and 5% above.

1.2.4 Basic Insulation Level (BIL) shall be 125 kV for windings, 95 kV for bushings.

2.0 APPLICABLE STANDARDS

Network transformers furnished under these specifications shall meet all applicable, ASTM, EEI-NEMA, ANSI, AND IEEE Standards, latest revision.

2.1 ANSI C57.12.40 - Subway and Vault Types (Liquid Immersed) Requirements.

2.2 ANSI/ASTM D3487 - Mineral Insulating Oil Used in Electrical Apparatus.

2.3. ASTM D2300 - Standard Test Method for Gassing of Insulating Oils under Electrical Stress and Ionizing. Modified Pirelli Method R (1991)

2.4 ASTM D1816 - Standard Test Method for Dielectric Breakdown Voltage of Insulating Oils of Petroleum Origin Using VED Electrodes.

2.5 ASTM D877 - Standard Practices for Sampling Water-Formed Deposits. R (1994)

2.6 ASTM D971 - Standard Test Method for Interfacial Tension of Oil against Water by the Ring Method.

2.7 ASTM/D1500 - Standard Test Method for ASTM Color of Petroleum Products. (ASTM Color Scale) (IP Designation: 196/91)

2.8 ASTM D1524 - Standard Test Method for Visual Examination of Used Electrical Insulating Oils of Petroleum Origin in the field.

2.9 ASTM D1533 - Standard Test Method for Water in Insulating Liquids. (Karl Fisher Method)

2.10 ASTM D924 - Standard Test Method for Dissipation Factor and Relative Permittivity of Electric Insulating Liquids.

3.0 FUNCTIONAL REQUIREMENTS

3.1 Transformers shall be self-cooled, 65 degrees (^{o}) Centigrade (C) temperature rise above ambient, vault type construction, suitable for occasional submerged operation.

3.2 Marking of terminals, winding connections, and vector relationships of windings shall be as shown on the attached drawing (Attachment I). On the faceplate of the transformer the phase configuration shall be denoted such that the phase corresponding to H1 shall be denoted as C-phase, H2 shall be denoted as A-phase, and H3 shall be denoted as B-phase.

3.3 The transformer shall be equipped with a digital liquid level indicator on all oil filled compartments. The gauge markings shall show the 25 degrees (^{o}) centigrade (C) level and the minimum and maximum levels. The words "Liquid Level" shall be on the dial or on a suitable nameplate mounted adjacent to the indicator.

3.4 The transformer shall be equipped with a digital thermometer on the main tank for indicating liquid temperature. The main tank thermometer shall be provided with electric alarm contacts.

3.5 A primary disconnect and grounding switch shall be provided on the transformer. The primary disconnect and grounding switch shall conform to the requirements identified in IEEE standard C57.12.40-2011.

When the transformer is viewed from the side of the primary switch, with the switch handle on the right hand side of the chamber, C-phase (H1) shall be closest to the handle, B-phase (H3) furthest from the handle, and A-phase (H2) between Phase B (H3) and C-phase (H1).

Sequential grounding sequence of operation shall be C-phase, then Phases C and A, and then Phases C, A, and B. This sequence of operation shall be identified on the switch index plate and also by stainless steel tags on the switch chamber. Those tags shall identify which phases are grounded and coordinate to the switch operation such that the operator can clearly determine which phases are grounded.

An electrical interlock shall prevent movement of the switch from any position when the transformer is energized. The sequence of operation shall be open, closed and ground, and the switch shall be designed so that when it is moved from open to ground, or ground to open, the operator shall pause in the closed position to give the electrical interlock time to engage if the transformer is energized. The operating handle shall be equipped for padlocking the switch in each direction.

3.6 Transformers shall either utilize a primary dead break switch with sequential grounding or a primary mag break switch with sequential grounding.

3.7 Transformers using a primary dead break switch with sequential grounding, which requires de-energized operation only w/special Austin Energy sequential grounding & phase notation (C, CA, CAB). The primary dead break switch with sequential grounding shall be a Quality Switch Type QS-GBN Model 4L0201503ST3-NT1 for 208Y/120 secondary voltage or Model 4L0201503ST3-NT2 for 480Y/277 secondary voltage

3.8 Transformers using a primary mag break switch with sequential grounding, which only interrupts exciting current w/special Austin Energy sequential grounding & phase notation (C, CA, CAB). The primary mag break switch with sequential grounding shall be a Quality Switch Type QS-GBN switch Model 4L0201503ST3-NA1 for 208Y/120 secondary voltage or Model 4L0201503ST3-NA2for 480Y/277 secondary voltage.

3.9 Alarm contacts shall be suitable for interrupting:

A. 0.02 ampere direct-current inductive load

B. 0.02 ampere direct-current noninductive load

C. 2.5 ampere alternating-current noninductive or inductive load

D. 250 volts maximum in all cases

3.10 A sudden pressure relay shall be mounted on the main tank to respond to sudden increases in internal gas pressure. A seal-in relay with contacts for alarm and tripping and a reset switch shall be externally mounted. Normal operating voltage of the seal-in relay shall be 125VAC. Adequate surge suppression to prevent false operations due to transient voltages on control leads shall be provided. The sudden pressure relay shall be designed such that external vibration or mechanical shocks shall not cause false operations. All mechanical provisions and equipment for testing shall be provided. In addition, the seal –in relay and wiring shall be rated for in-circuit testing with remote lockout relay.

3.11 All transformers supplied to AE shall meet or exceed the efficiency values in accordance with the latest revision of Department of Energy CFR Title 10, Volume 3, Chapter II, Subchapter D, Part 431, Subpart K – "Energy Efficiency Program for Certain Commercial and Industrial Equipment" as applicable. Certified test data by serial number shall be provided with each transformer.

3.12 The transformer shall be equipped with Dissolved Gas Analysis visual indicator.

4.0 PHYSICAL REQUIREMENTS

4.1 The transformer shall have 600 ampere minimum side-mounted apparatus bushings on the high side. The bushings shall be bolted to the tank for ease in replacement. Welded bushings are not acceptable. Bushings provided shall be Elastimold K650-S1 (copper) or AE approved equivalent.

4.2 The low voltage throat and bushings shall be in accordance with ANSI C57.12.40, Figure 3 for 216Y/125V transformers rated 500 kVA and 480Y/277V transformers rated 500, 750, and 1000 kVA. Figure 4 for 216Y/125V transformers rated 750, 1000, and 1500 kVA; and 480Y/277V transformers rated 1500, and 2000 kVA.

4.3 The neutral bushing shall be insulated from the transformer tank. The ground to tank shall be made by a flexible copper braid bolted between the transformer tank and the neutral bushing of the transformer. Copper braid size shall be equal to 500 MCM bare copper. The neutral bushing shall have a four hole NEMA pad for 1000 kVA and smaller and a six-hole NEMA pad for 1500 and 2000 kVA transformers.

4.4 The high voltage compartment shall be completely sealed and filled with insulating oil prior to shipping.

4.5 The tap changer shall be designed for de-energized operation. An indicator shall clearly show the position of the tap changer.

4.6 The transformer tank shall be of a sealed construction, consisting of a welded main cover equipped with lifting lugs and hand-hole cover(s) with gasket.

4.7 Jack pads or bars shall be provided so that there is three inches (3") of clearance up from the bottom of the transformer for lifting jacks.

4.8 Transformer sizes listed below are maximums and shall not be exceeded.

KVA	HEIGHT	LENGTH	DEPTH
500	6'0"	7'0"	3'6"
750	6'2"	7'0"	4'0"
1000	6'2"	7'6"	4'0"
1500	6'6"	8'0"	4'6"
2000	6'8"	8'6"	5'0"

4.9 All high voltage windings shall be made of copper.

5.0 INSULATING OIL REQUIREMENTS

5.1 The insulating oil shall be non-polychlorinated biphenyl (PCB), defined as containing less than one part per million (ppm) PCB. Certification of the non-PCB oil shall be furnished and shall include the method of testing used.

5.2 The transformer nameplate shall be marked “non-PCB." In addition, a blue “non-PCB” label of a minimum 1”X 2” size shall be installed directly below the nameplate.

5.3 The oil shall conform to the latest revision of ANSI/ASTM D3487, Type II. The gassing coefficient shall be negative when tested in accordance with ASTM D2300, Section 2.0.

5.4 The Contractor shall supply test reports, which verify compliance with the oil performance requirements given below:

Test and Method	
Dielectric Strength, ASTM D-1816, kV Minimum,	
0.04 inch gap:	20 kV
0.08 inch gap:	40 kV
Dielectric Strength, ASTM D-877, kV Minimum	30 kV
Power Factor, ASTM D-924,	
% maximum; 25^{o} C	0.15
% maximum; 100 ^{o} C	1.50
Interfacial Tension, ASTM D-971, mN/m Minimum:	35
Color, ASTM D-1500, ASTM Units:	1.0
Visual Examination, ASTM D-1524	Bright and Clear
Water Content, ATSM D-1533, ppm, maximum:	25

5.5 The Contractor shall be subject upon request, to furnish laboratory test data for the insulating oil. Oil furnished under these specifications shall be subject to tests and any insulating oil failing these tests will be returned to the Contractor at the Contractor’s expense.

6.0 COST EVALUATION

6.1 All network transformer bids will be evaluated and awarded based on purchase price, guaranteed no load losses, and guaranteed winding losses. The formula and cost of losses are as follows:

Total Evaluated Bid (owning cost) = Bid Price + (cost of no load losses) x (quoted guaranteed no load losses) + (Cost of winding losses) x (quoted guaranteed winding losses)

Cost of no load losses = $5,239.00/kW

Cost of winding losses = $3,123.00/kW

6.2 Each Bidder shall quote the guaranteed no load losses and guaranteed winding losses at the time of bid opening.

6.3 Before or upon delivery, Contractor's certified factory test reports shall be provided to AE for final review.

6.4 Losses shall be the actual tested losses corrected to 20°C no load and 85°C for load, reported by serial number and City of Austin purchase order number for each transformer delivered.

6.5 The actual losses of any one transformer on an order shall not exceed the quoted guaranteed losses by more than the following percentages:

	No load losses	Total losses
Network Transformer	10%	6%

6.6 Penalty

For each transformer where the actual losses exceed the quoted guaranteed losses, a penalty will be assessed through a price reduction for each transformer.

Penalty = 2[($5,239.00/kW) (actual no load losses - quoted guaranteed no load losses) + ($3,123.00/kW) (actual winding losses - quoted guaranteed winding losses)]

7.0 SIGNAGE

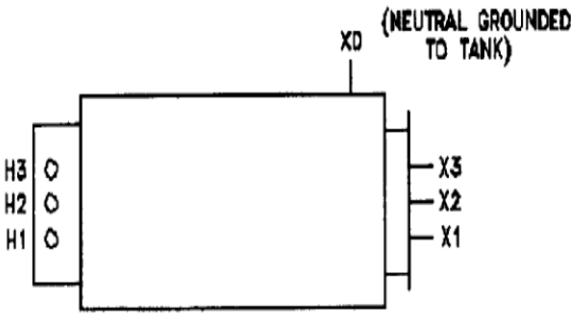
TYPICAL EXTERNAL SIGNAGE MATERIAL REQUIREMENTS OF 3-PHASE PAD-MOUNTED TRANSFORMERS

"NO PCBS" decal: 6 inch X 6 inch, blue. Base Film: 0.0035-inch cast polyvinyl chloride, with UV inhibitors as per MIL-M-22106A. Cyasorb UV-9 light absorber C14H1203, Gloss 80 UL 94 rated. Over lamination: 002PVF (polyvinylflouride) Tedlar UV screening film from E.I. DuPont. Cold-seal bonded. Adhesive: 0.002-inch permanent acrylic hi-tack, with high-temperature-resistant Elasticisors for adhesion at 40 deg. F. PSTC test method: #1 modified for a 15 minute dwell time, with 2 mils of adhesive, 56 oz/inch width rating. Ink: Silkscreen type 4, with automotive grade pigments and binders, 0.0004-inch thick + 0.0001, inch high pigment volume concentration total PVC 40-50 (copper phthalocyanines). Liner: 0.0007-inch + 0.001-inch Kraft coated one side chemical resistant. Salt spray: 240 hours 5%, at 100 degrees, with no blistering, color change, or other material degradation. No effect when immersed in diesel fuel, motor oil, anti-freeze, detergent 2 %, ammonium hydroxide (12% and 39%), kerosene, acetic acid, acetone and water. Service temperature range: -40 to +170 deg. F. Decal shall last a minimum lifetime exterior durability of 15 years from installation date with proper surface preparation.

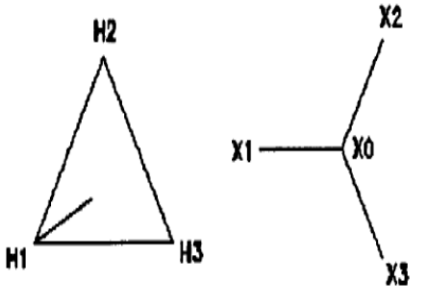
"SIZE KVA" decal: width as required, 2 7/8 inches tall, Engineer Grade, adhesive reflective vinyl, with yellow numbers, black background.

"SIZE SECONDARY" decal: width as required, 2-7/8 inches tall, Engineer Grade, adhesive reflective vinyl, with yellow numbers on Black Background. Sticker shall read "L-L VoltageY / L-G Voltage".

ATTACHMENT 1



TERMINAL DESIGNATIONS



DELTA – WYE
VECTOR RELATIONSHIPS

TERMINAL DESIGNATIONS AND VECTOR RELATIONSHIPS
FOR NETWORK TRANSFORMERS

CITY OF AUSTIN - AUSTIN ENERGY (AE)

PURCHASE SPECIFICATION

FOR

TRANSFORMER, NTWK, 3PH, 500-2500 KVA, 34.5KV

DATE	PREPARED BY	ISSUANCE/REVISION	APPROVAL PROCESS SUPV. / MATERIALS SUPV.
05/29/97	Steve Booher	Revision	George Martinez / Peter Soosay
03/10/99	George Martinez	Revision	George Martinez / Peter Soosay
03/22/99	George Martinez	Revision	George Martinez / David Sloan
07/16/99	George Martinez	Revision	Peter Soosay / George Martinez
03/04/05	Steven Booher	Revision	
06/29/11	Steven Booher	Revision	
10/19/15	Brantley Gosey	Revision	Michael Pittman
11/06/15	Dennis Patrick	Revision	
03/10/16	Brantley Gosey	Revision	Michael Pittman
06/06/16	Brantley Gosey	Revision	

REASON FOR REVISION	*AFFECTED PARAGRAPHS*
Network Transformer to include 2500 KVA, 480/277VAdd sudden pressure device, revised evaluation, Revised transformer size ratings, added Warranty, and drawing with test reports.	Sections: 1.2.2, 4.2, 4.8 Section 3.7, 6.1 Section 1.2.2
6/27/11 Added DOE requirements and revised loss requirements	Section 7.0 - 7.6 Section 3.8 and 6.1
6/27/11 Added 2500 KVA 4160/2400 requirements	Section 1.2.2 and 4.3
10/19/15: Revise DOE requirement	Section 3.8
11/6/15: Added Secondary Voltage Sticker	Section 7.0
03/10/16: Digital Gauges, DGA indicator, Primary Disconnect and Grounding Switch	Section 3.2-3.12
06/06/16: Added language from 09/2011 Addendum	Section 3.5

This specification, until rescinded, shall apply to each future purchase and contract for the commodity described herein.
Retain for future reference.

CITY OF AUSTIN- AUSTIN ENERGY

PURCHASE SPECIFICATION
FOR
TRANSFORMER, NTWK, 3PH, 500-2500 KVA, 34.5KV

1.0 SCOPE AND CLASSIFICATION

1.1 Scope

1.1.1 This specification covers three-phase oil filled network type transformers.

1.1.2 No deviations from this specification will be permitted.

1.2 Classification

1.2.1 Voltage shall be 34,500 Volts delta, 480Y/277 or 216Y/125 Volts.

1.2.2 Transformer rating shall be as specified on bid sheet.

a. 500, 750, and 1000 for 216Y/125

b. 500, 750, 1000, 2000 and 2500 kVA for 480Y/277

c. 2500 kVA for 4160/2400

1.2.3 No-load high voltage taps shall be 5% below, 2 1/2% below, rated 2 1/2% above, and 5% above.

1.2.4 Basic Insulation Level (BIL) shall be 200 kV for windings, 150 kV for bushings.

2.0 APPLICABLE STANDARDS

Network transformers furnished under these specifications shall meet all applicable, ASTM, EEI-NEMA, ANSI, AND IEEE Standards, latest revision.

2.1 ANSI C57.12.40 - Subway and Vault Types (Liquid Immersed) Requirements.

2.2 ANSI/ASTM D3487 - Mineral Insulating Oil Used in Electrical Apparatus.

2.3. ASTM D2300 - Standard Test Method for Gassing of Insulating Oils Under Electrical Stress and Ionizing. Modified Pirelli Method R (1991)

2.4 ASTM D1816 - Standard Test Method for Dielectric Breakdown Voltage of Insulating Oils of Petroleum Origin Using VED Electrodes.

2.5 ASTM D877 - Standard Practices for Sampling Water-Formed Deposits. R (1994)

2.6 ASTM D971 - Standard Test Method for Interfacial Tension of Oil Against Water by the Ring Method.

2.7 ASTM/D1500 - Standard Test Method for ASTM Color of Petroleum Products. (ASTM Color Scale) (IP Designation: 196/91)

2.8 ASTM D1524 - Standard Test Method for Visual Examination of Used Electrical Insulating Oils

of Petroleum Origin in the field.

2.9 ASTM D1533 - Standard Test Method for Water in Insulating Liquids. (Karl Fisher Method)

2.10 ASTM D924 - Standard Test Method for Dissipation Factor and Relative Permittivity of Electric Insulating Liquids.

3.0 FUNCTIONAL REQUIREMENTS

3.1 Transformers shall be self-cooled, 65 degrees (^{o}) Centigrade (C) temperature rise above ambient, vault type construction, suitable for occasional submerged operation.

3.2 Marking of terminals, winding connections, and vector relationships of windings shall be as shown on the attached drawing (Attachment I). On the faceplate of the transformer the phase configuration shall be denoted such that the phase corresponding to H1 shall be denoted as C-phase, H2 shall be denoted as A-phase, and H3 shall be denoted as B-phase.

3.3 The transformer shall be equipped with a digital liquid level indicator on all oil filled compartments. The gauge markings shall show the 25 degrees (^{o}) centigrade (C) level and the minimum and maximum levels. The words “Liquid Level” shall be on the dial or on a suitable nameplate mounted adjacent to the indicator.

3.4 The transformer shall be equipped with a digital thermometer on the main tank for indicating liquid temperature. The main tank thermometer shall be provided with electric alarm contacts.

3.5 A primary disconnect and grounding switch shall be provided on the transformer. This primary disconnect and grounding switch shall conform to the requirements identified in IEEE standard C57.12.40-2011.

When the transformer is viewed from the side of the primary switch, with the switch handle on the right hand side of the chamber, C-phase (H1) shall be closest to the handle, B-phase (H3) furthest from the handle, and A-phase (H2) between Phase B (H3) and C-phase (H1).

Sequential grounding sequence of operation shall be C-phase, then Phases C and A, and then Phases C, A, and B. This sequence of operation shall be identified on the switch index plate and also by stainless steel tags on the switch chamber. Those tags shall identify which phases are grounded and coordinate to the switch operation such that the operator can clearly determine which phases are grounded.

An electrical interlock shall prevent movement of the switch from any position when the transformer is energized. The sequence of operation shall be open, closed and ground, and the switch shall be designed so that when it is moved from open to ground, or ground to open, the operator shall pause in the closed position to give the electrical interlock time to engage if the transformer is energized. The operating handle shall be equipped for padlocking the switch in each direction.

3.6 Transformers shall either utilize a primary dead break switch with sequential grounding or a primary mag break switch with sequential grounding. (Except for 2500 kVA for 4160/2400)

3.7 Transformers using a primary dead break switch with sequential grounding, which requires de-energized operation only w/special Austin Energy sequential grounding & phase notation (C, CA, CAB). The primary dead break switch with sequential grounding shall be a Quality Switch Type QS-GBN Model 4L0202003ST3-NT1 for 208Y/120 secondary voltage or Model 4L0202003ST3-NT2 for 480Y/277 secondary voltage

3.8 Transformers using a primary mag break switch with sequential grounding, which only interrupts exciting current w/special Austin Energy sequential grounding & phase notation (C, CA, CAB). The primary mag break switch with sequential grounding shall be a Quality Switch Type QS-GBN switch Model 4L0202003ST3-NA1 for 208Y/120 secondary voltage or Model 4L0202003ST3-NA2 for 480Y/277 secondary voltage.

3.9 Alarm contacts shall be suitable for interrupting:

A. 0.02 ampere direct-current inductive load

B. 0.02 ampere direct-current noninductive load

C. 2.5 ampere alternating-current noninductive or inductive load

d. 250 volts maximum in all cases

3.10 A sudden pressure relay shall be mounted on the main tank to respond to sudden increases in internal gas pressure. A seal-in relay with contacts for alarm and tripping and a reset switch shall be externally mounted. Normal operating voltage of the seal-in relay shall be 125VAC. Adequate surge suppression to prevent false operations due to transient voltages on control leads shall be provided. The sudden pressure relay shall be designed such that external vibration or mechanical shocks shall not cause false operations. All mechanical provisions and equipment for testing shall be provided. In addition, the seal –in relay and wiring shall be rated for in-circuit testing with remote lockout relay.

3.11 All transformers supplied to AE shall meet or exceed the efficiency values in accordance with the latest revision of Department of Energy CFR Title 10, Volume 3, Chapter II, Subchapter D, Part 431, Subpart K – "Energy Efficiency Program for Certain Commercial and Industrial Equipment" as applicable. Certified test data by serial number shall be provided with each transformer.

3.12 The transformer shall be equipped with Dissolved Gas Analysis visual indicator.

4.0 PHYSICAL REQUIREMENTS

4.1 The transformer shall have 600 ampere minimum side-mounted apparatus bushings on the high side. The bushings shall be bolted to the tank for ease in replacement. Welded bushings are not acceptable. Bushings provided shall be Elastimold 750-S1 (copper) or AE approved equivalent.

4.2 The low voltage throat and bushings shall be in accordance with ANSI C57.12.40, Figure 3 for 216Y/125V transformers rated 500 kVA and 480Y/277V transformers rated 500, 750, and 1000 kVA. Figure 4 for 216Y/125V transformers rated 750, 1000, and 1500 kVA; and 480Y/277V transformers rated 1500, 2000 and 2500 kVA.

4.3 On the 2500 kVA 4160/2400 transformer the low side bushings shall be bolted to the tank for ease in replacement. Welded bushings are not acceptable. Bushings provided shall be Elastimold 750-S1 (copper) or AE approved equivalent. The network protector throat is not required on the 2500 kVA 4160/2400 volt transformer.

4.4 The neutral bushing shall be insulated from the transformer tank. The ground to tank shall be made by a flexible copper braid bolted between the transformer tank and the neutral bushing of the transformer. Copper braid size shall be equal to 500 MCM bare copper. The neutral bushing shall have a four hole NEMA pad for 1000 kVA and smaller and a six hole NEMA pad for 1500, 2000 and 2500 kVA transformers.

4.5 The high voltage compartment shall be completely sealed and filled with insulating oil prior to shipping.

4.6 The tap changer shall be designed for de-energized operation. An indicator shall clearly show the position of the tap changer.

4.7 The transformer tank shall be of a sealed construction, consisting of a welded main cover equipped with lifting lugs and gasketed hand hole cover(s).

4.8 Jack pads or bars shall be provided so that there is three inches (3") of clearance up from the bottom of the transformer for lifting jacks.

4.9 Transformer sizes listed below are maximum and shall not be exceeded.

KVA	HEIGHT	LENGTH	DEPTH
500	6'0"	7'0"	3'6"
750	6'2"	7'0"	4'0"
1000	6'2"	7'6"	4'0"
1500	6'6"	8'0"	4'6"
2000	6'8"	8'6"	5'0"
2500	7'0"	9'0"	5'6"

4.10 All high voltage windings shall be made of copper.

5.0 INSULATING OIL REQUIREMENTS

5.1 The insulating oil shall be non-PCB (polychlorinated biphenyl), defined as containing less than one part per million (ppm) PCB. Certification of the non-PCB oil shall be furnished and shall include the method of testing used.

5.2 The transformer nameplate shall be marked "non-PCB". In addition, a blue "non-PCB" label of a minimum 1"X 2" size shall be installed directly below the nameplate.

5.3 The oil shall conform to the latest revision of ANSI/ASTM D3487, Type II. The gassing coefficient shall be negative when tested in accordance with ASTM D2300, Section 2.0.

5.4 The Contractor shall supply test reports, which verify compliance with the oil performance requirements given below:

Test and Method	
Dielectric Strength, ASTM D-1816, kV Minimum,	
0.04 inch gap:	20 kV
0.08 inch gap:	40 kV
Dielectric Strength, ASTM D-877, kV Minimum	30 kV
Power Factor, ASTM D-924,	
% maximum; 25^{o} C	0.15
% maximum; 100 ^{o} C	1.50
Interfacial Tension, ASTM D-971, mN/m Minimum:	35
Color, ASTM D-1500, ASTM Units:	1.0
Visual Examination, ASTM D-1524	Bright and Clear
Water Content, ATSM D-1533, ppm, maximum:	25

5.5 The Contractor shall be subject upon request, to furnish laboratory test data for the insulating oil. Oil furnished under these specifications shall be subject to tests and any insulating oil failing these tests will be returned to the Contractor at the Contractor's expense.

6.0 COST EVALUATION

6.1 All network transformer bids will be evaluated based on purchase price, guaranteed no load losses, and guaranteed winding losses. The formula and cost of losses are as follows:

Total Evaluated Bid (owning cost) = Bid Price + (cost of no load losses) x (quoted guaranteed no load losses) + (Cost of winding losses) x (quoted guaranteed winding losses)

Cost of no load losses = $5,239.00/kW
Cost of winding losses = $3.123.00/kW

6.2 Each Bidder shall quote the guaranteed no load losses and guaranteed winding losses at the time of bid opening.

6.3 Before or upon delivery, Contractor's certified factory test reports shall be provided to AE for final review.

6.4 Losses shall be the actual tested losses corrected to 20^{o}C no load and 85^{o}C for load, reported by serial number and City of Austin purchase order number for each transformer delivered (see section 6.2).

6.5 The actual losses of any one transformer on an order shall not exceed the quoted guaranteed losses by more than the following percentages:

	No load losses	Total losses
Network Transformer	10%	6%

6.6 Penalty

For each transformer where the actual losses exceed the quoted guaranteed losses, a penalty will be assessed through a price reduction for each transformer.

Penalty = 2[($5,239.00/kW) (actual no load losses - quoted guaranteed no load losses) + ($3.123.00/kW) (actual winding losses - quoted guaranteed winding losses

7.0 SIGNAGE

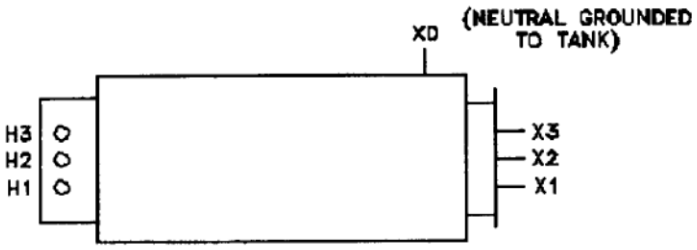
TYPICAL EXTERNAL SIGNAGE MATERIAL REQUIREMENTS OF 3-PHASE PAD-MOUNTED TRANSFORMERS

"NO PCBS" decal: 6 inch X 6 inch, blue. Base Film: 0.0035-inch cast polyvinyl chloride, with UV inhibitors as per MIL-M-22106A. Cyasorb UV-9 light absorber C14H1203, Gloss 80 UL 94 rated. Over lamination: 002PVF (polyvinylflouride) Tedlar UV screening film from E.I. DuPont. Cold-seal bonded. Adhesive: 0.002-inch permanent acrylic hi-tack, with high-temperature-resistant Elasticisors for adhesion at 40 deg. F. PSTC test method: #1 modified for a 15 minute dwell time, with 2 mils of adhesive, 56 oz/inch width rating. Ink: Silkscreen type 4, with automotive grade pigments and binders, 0.0004-inch thick + 0.0001, inch high pigment volume concentration total PVC 40-50 (copper phthalocyanines). Liner: 0.0007-inch + 0.001-inch Kraft coated one side chemical resistant. Salt spray: 240 hours 5%, at 100 degrees, with no blistering, color change, or other material degradation. No effect when immersed in diesel fuel, motor oil, anti-freeze, detergent 2 %, ammonium hydroxide (12% and 39%), kerosene, acetic acid, acetone and water. Service temperature range: -40 to +170 deg. F. Decal shall last a minimum lifetime exterior durability of 15 years from installation date with proper surface preparation.

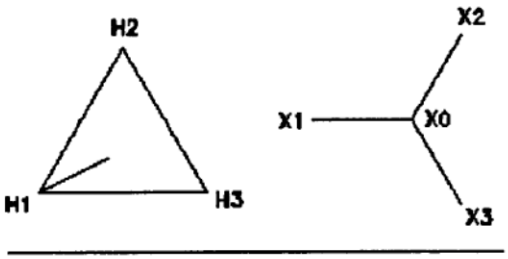
"SIZE KVA" decal: width as required, 2 7/8 inches tall, Engineer Grade, adhesive reflective vinyl, with yellow numbers, black background.

"SIZE SECONDARY" decal: width as required, 2-7/8 inches tall, Engineer Grade, adhesive reflective vinyl, with yellow numbers on Black Background. Sticker shall read "L-L Voltage Y / L-G Voltage".

ATTACHMENT I



TERMINAL DESIGNATIONS



DELTA – WYE
VECTOR RELATIONSHIPS

TERMINAL DESIGNATIONS AND VECTOR RELATIONSHIPS
FOR NETWORK TRANSFORMERS

ATTACHMENT 1

BID SHEET
CITY OF AUSTIN
NETWORK TRANSFORMER ANNUAL PRICE AGREEMENT

BID NO. IFB GGU0160
RX NO. RQM-1100-16020200239
DATE: JULY 19, 2016
BUYER: GABRIEL GUERRERO

Special Instructions: Be advised that exceptions taken to any portion of the solicitation may jeopardize acceptance of the bid.

Note: Bidders shall input their offered products' guaranteed "No Load Losses" and "Winding Losses" in the "kW Lost" cells for each type of transformer specified on this Bid Sheet. These values will be used to calculate their offered product's Evaluated Price, which shall represent the total owning cost and be used to determine the best cost value for the City. For more information about contract award and cost evaluation reference Supplemental Purchase Provisions (Section 0400, Part 2.A) and Specifications E-708 & E-709 (Section 6.0).

ITEM	ITEM DESCRIPTION	ESTIMATED ANNUAL QUANTITY	UNIT	UNIT PRICE	EXTENDED PRICE	EVALUATED UNIT PRICE (UNIT PRICE + TOTAL LOSSES)	EVALUATED EXTENDED PRICE
1	Transformer, Network, 3 phase 500 kVA – 12,470 Volt Primary, 216Y/125 Volt Secondary in Accordance with Specification E-708 AE P/N 16823 kW Lost / $/kW / Losses No Load Losses: ____ X $ 5,239.00 = ____ Winding Losses: ____ X $ 3,123.00 = ____ Total Losses = ____ Manufacturer: ____ Part Number: ____	10	EA				
2	Transformer, Network, 3 Phase 750 kVA – 12,470 Volt Primary, 216Y/125 Volt Secondary in Accordance with Specification E-708 AE P/N 16827 kW Lost / $/kW / Losses No Load Losses: ____ X $ 5,239.00 = ____ Winding Losses: ____ X $ 3,123.00 = ____ Total Losses = ____ Manufacturer: ____ Part Number: ____	6	EA				

3	**Transformer, Network, 3 phase 500 kVA – 12,470 Volt Primary, 480Y/277 Volt Secondary in Accordance with Specification E-708** **AE P/N 16824** **kW Lost** **$/kW** **Losses** **No Load Losses:** **X $ 5,239.00 =** **Winding Losses:** **X $ 3,123.00 =** **Total Losses =** **Manufacturer:** **Part Number:**	1	EA					
4	**Transformer, Network, 3 phase 1000 kVA – 12,470 Volt Primary, 480Y/277 Volt Secondary in Accordance with Specification E-708** **AE P/N 16817** **kW Lost** **$/kW** **Losses** **No Load Losses:** **X $ 5,239.00 =** **Winding Losses:** **X $ 3,123.00 =** **Total Losses =** **Manufacturer:** **Part Number:**	2	EA					
5	**Transformer, Network, 3 phase 1500 kVA – 12,470 Volt Primary, 480Y/277 Volt Secondary in Accordance with Specification E-708** **AE P/N 16819** **kW Lost** **$/kW** **Losses** **No Load Losses:** **X $ 5,239.00 =** **Winding Losses:** **X $ 3,123.00 =** **Total Losses =** **Manufacturer:** **Part Number:**	1	EA					
6	**Transformer, Network, 3 phase 2000 kVA – 12,470 Volt Primary, 480Y/277 Volt Secondary in Accordance with Specification E-708** **AE P/N 16821** **kW Lost** **$/kW** **Losses** **No Load Losses:** **X $ 5,239.00 =** **Winding Losses:** **X $ 3,123.00 =** **Total Losses =** **Manufacturer:** **Part Number:**	1	EA					

7	**Transformer, Network, 3 phase 500kVA – 34,500 Volt Primary, 216Y/125 Volt Secondary in Accordance with Specification E-709** **AE P/N 16825** **kW Lost** **$/kW** **Losses** **No Load Losses:** **X $ 5,239.00 =** **Winding Losses:** **X $ 3,123.00 =** **Total Losses =** **Manufacturer:** **Part Number:**	9	EA				
8	**Transformer, Network, 3 phase 750kVA – 34,500 Volt Primary, 216Y/125 Volt Secondary in Accordance with Specification E-709** **AE P/N 16828** **kW Lost** **$/kW** **Losses** **No Load Losses:** **X $ 5,239.00 =** **Winding Losses:** **X $ 3,123.00 =** **Total Losses =** **Manufacturer:** **Part Number:**	4	EA				
9	**Transformer, Network, 3 phase 500kVA – 34,500 Volt Primary, 480Y/277 Volt Secondary in Accordance with Specification E-709** **AE P/N 16826** **kW Lost** **$/kW** **Losses** **No Load Losses:** **X $ 5,239.00 =** **Winding Losses:** **X $ 3,123.00 =** **Total Losses =** **Manufacturer:** **Part Number:**	2	EA				
10	**Transformer, Network, 3 phase 1000kVA – 34,500 volt primary, 480Y/277 Volt Secondary in Accordance with Specification E-709** **AE P/N 16818** **kW Lost** **$/kW** **Losses** **No Load Losses:** **X $ 5,239.00 =** **Winding Losses:** **X $ 3,123.00 =** **Total Losses =** **Manufacturer:** **Part Number:**	9	EA				

11	**Transformer, Network, 3 phase 1500kVA – 34,500 volt primary, 480Y/277 Volt Secondary in Accordance with Specification E-709** **AE P/N 16820** **kW Lost** **$/kW** **Losses** **No Load Losses:** ____ **X $ 5,239.00 =** ____ **Winding Losses:** ____ **X $ 3,123.00 =** ____ **Total Losses =** ____ **Manufacturer:** ____ **Part Number:** ____	29	EA				
12	**Transformer, Network, 3 phase 2000kVA – 34,500 volt primary, 480Y/277 Volt Secondary in Accordance with Specification E-709** **AE P/N 16822** **kW Lost** **$/kW** **Losses** **No Load Losses:** ____ **X $ 5,239.00 =** ____ **Winding Losses:** ____ **X $ 3,123.00 =** ____ **Total Losses =** ____ **Manufacturer:** ____ **Part Number:** ____	15	EA				
13	**Transformer, Network, 3 phase 2500kVA – 34,500 volt primary, 480Y/277 Volt Secondary in Accordance with Specification E-709** **AE P/N 22212** **kW Lost** **$/kW** **Losses** **No Load Losses:** ____ **X $ 5,239.00 =** ____ **Winding Losses:** ____ **X $ 3,123.00 =** ____ **Total Losses =** ____ **Manufacturer:** ____ **Part Number:** ____	1	EA				
14	**Transformer, Network, 3 phase 2500kVA – 34,500 volt primary, 4160/2400 Volt Secondary in Accordance with Specification E-709** **AE P/N 22213** **kW Lost** **$/kW** **Losses** **No Load Losses:** ____ **X $ 5,239.00 =** ____ **Winding Losses:** ____ **X $ 3,123.00 =** ____ **Total Losses =** ____ **Manufacturer:** ____ **Part Number:** ____	1	EA				
The prices listed on this Bid Sheet shall be the total prices, inclusive of all costs, including but not limited to: **Warranty per Supplemental Purchase Provisions (Section 0400, Part 9), Drawings & Test Reports per Supplemental Purchase Provisions (Section 0400, Part 11), FOB destination delivery, and acceptance in full of the terms & conditions listed in and referenced by the solicitation documents.**			**TOTAL BID**			**TOTAL EVALUATED BID**	

The following documents are required to be submitted with the bid. Failure to submit these documents may result in rejection of the bid.

A. All documents included in the solicitation that require signatures:

i. Offer Sheet
ii. Bid Sheet
iii. Non-Discrimination Certification (Section 0800)
iv. Non-Suspension or Debarment Certification (Section 0805)
v. Non-Collusion, Non-Conflict of Interest, Anti-Lobbying Affidavit (Section 0810)
vi. Nonresident Bidder Provisions (Section 0835)
vii. No Goals (Section 0900)

B. Materials Specifications / Descriptive Literature per Supplemental Purchasing Provisions (Section 0400, Part 10)
C. Evidence of ALL Contractors Qualifications stated in the Supplemental Purchasing Provisions (Section 0400, Part 15), including:

i. As evidence of compliance with Supplemental Purchasing Provisions (Section 0400, Part 15.A), the Contractor shall submit a tabulation of at least the minimum number of transformers produced at the manufacturing facility Offered to clearly indicate compliance with the requirements of Part 15.A. The tabulation shall include the purchaser's contact information (company name, location, contact person, contact person's telephone number, etc.), kVA rating, voltage rating (HV and LV), and year of manufacture.
ii. Location of maintenance staff and service facility as per Section 0400, Part 15.B. _____

BIDDER'S FIRM DELIVERY IS _____ CALENDAR DAYS AFTER RECEIPT OF ORDER

DELIVERY TERMS: DELIVERY IS TO BE FOB DESTINATION, PREPAID AND ALLOWED

DELIVERY METHOD: _____

COMPANY NAME: _____

PRINTED NAME: _____

EMAIL ADDRESS: _____