

INVITATION FOR BID – THIS IS NOT AN ORDER RETURN ORIGINAL – KEEP ONE COPY

IFB # **76002**

COMMODITY TITLE: **DISTRIBUTION TRANSFORMERS**

Return your Bid in an envelope, sealed and clearly marked on the outside with Bid # shown below to:

**CITY OF PROVO  
PURCHASING DIVISION  
351 W CENTER ST  
PROVO, UT 84601**

Bids must be received and logged in prior to the date and time indicated. Bids will not be accepted after:

**1:30 P.M. Thursday, June 19, 2008**

For Technical Information Contact:
Tina Wilkening, Energy Warehouse Supervisor
Email: <a href="mailto:twilkening@provo.utah.gov">twilkening@provo.utah.gov</a>
Phone: (801) 852-6860

Delivery Requirement:

**FAILURE TO SIGN THIS SECTION WILL DISQUALIFY YOUR RESPONSE**

The undersigned agrees to furnish the articles and/or services listed in this document at the prices and terms stated, subject to the General Conditions of this Bid:

Firm Name	Terms of Sale
Signature	F.O.B. Point xxxDESTINATIONxxx
Printed Name	
Date	Phone
Fax	
Email	Website

**If you download a Bid/Proposal from the City of Provo website, ([www.provo.org](http://www.provo.org)) you must notify the Purchasing Division [bids@provo.utah.gov](mailto:bids@provo.utah.gov) that you plan to bid on or make an offer on the subject of goods/project. Failure to notify us may result in your not being notified of any addenda or changes and may subsequently disqualify you from the bid or proposal process.**

## **SECTION 1: INSTRUCTION TO BIDDERS**

The general rules and conditions which follow apply to all formal solicitations and resulting purchase orders or other awards issued by the PURCHASING DIVISION, unless otherwise specified. Bidder's or their authorized representatives are expected to fully inform themselves as to the conditions, requirements, and specifications before submitting proposals, failure to do so will be at the Bidder's own risk and cannot secure relief on the plea or error. Disputes or appeals on all proposals or contracts shall conform with Provo City Code 3.02.020.

The intent of this Invitation for Bid and resulting contract with competent vendors is to obtain Electric Distribution Transformers for installation by Provo City and/or contracted crews. It is to be a "Sealed Bid" to be opened at the date and time designated. It is the intent that lowest cost from the sealed bid should be the first and major concern and at the same time receive quality service from Offeror. Quantities represented for materials are approximate. *Provo City Specifications have changed, carefully read all specifications and requirements.*

### **1.1 CONTRACT TIMES**

The Contract Time will be for one (1) year from the date of award. The Owner may extend the term of the Contract for one (1) additional year or portion thereof with adjusted pricing submitted in the BID, if any, under the same terms and conditions of this Agreement. The Owner will be the sole judge of extending the contract for one (1) additional year or portion thereof. Any changes in the quantities to be purchased for the additional extension shall be noted in the Bid Form. Notice to extend the Contract for an additional year will be given to the successful Bidder by the Owner in writing thirty (30) days before the end of the Contract time.

### **1.2 FORMS & MAILING OF PROPOSALS**

- 1.2.1 All proposals shall be properly signed in ink in the proper spaces, and submitted in a sealed envelope identifying proposal as Invitation For Bid (IFB). Failure to do so may cause premature opening. IFB's opened prematurely will not be accepted.
- 1.2.2 Bidder shall submit the ORIGINAL copy and retain a copy of the solicitation.
- 1.2.3 In the event that the proposal contains bulky subject material, the special mailing envelope must be firmly affixed to any other wrapper being used.
- 1.2.4 All information required by the solicitation must be supplied to constitute a responsive proposal.
- 1.2.5 Provo City (Owner) reserves the right to reject any and all proposals should the proposal prices and/or any other submissions differ on the copies of the submitted proposal. Owner reserves the right to waive informalities in proposals.
- 1.2.6 For information pertaining to the proposal preparation contact:  
**David W. Huntsman, Purchasing at (801) 852-6541.**

### **1.3 DULY AUTHORIZED SIGNATURE**

- 1.3.1 The Proposal must contain the signature of a duly authorized officer or agent of the Bidder's company empowered with the right to bind the Bidder for the amounts estimated and terms proposed. The Bidder must also provide evidence of the authority of the officer or agent to bind the Bidder.

### **1.4 TIME FOR RECEIVING PROPOSALS**

- 1.4.1 Proposals received prior to the time of opening will be securely kept, unopened.
- 1.4.2 The Purchasing Manager and/or representative will decide when the specified time has arrived for opening. Proposals received thereafter will not be considered except as provided for in the instructions listed above.
- 1.4.3 The Purchasing Manager and/or his representative will not be liable for and will not accept any responsibility, for the premature opening of a proposal not properly addressed and identified.
- 1.4.4 Unless specifically authorized by the Provo City Purchasing Manager, telephonic proposals will not be considered. However modifications by telegraph fax, etc., of proposals already submitted will be considered if received prior to the time for opening of proposals.

### **1.5 CONDITIONAL PROPOSALS**

- 1.5.1 Conditional proposals are subject to rejection in whole or in part.

## **1.6 LATE PROPOSALS & MODIFICATIONS OF PROPOSALS**

- 1.6.1 Any proposal modification received at the office designated in the solicitation after the exact time specified for receipt is considered a late proposal/modification. Late proposal/modifications will not be considered for award except if it is received before award is made and either:
- a. It was sent by registered or certified mail not later than the fifth (5th) calendar day prior to the date specified for receipt of the proposal/modification; or
  - b. It was sent by mail and is determined by the City Purchasing Manager that the late receipt was due solely to mishandling by the City after receipt at the address specified in the solicitation.
- 1.6.2 The time of receipt of proposals at the specified location is time-date stamped on the proposal wrapper or other documentary evidence of receipt and maintained by the Buyer at specified location.

## **1.7 WITHDRAWAL OF PROPOSALS**

- 1.7.1 A Bidder may request withdrawal of their proposal under the following circumstances.
- a. Proposals may be withdrawn by written request to Owner received no later than the day and hour set for opening of proposals. The proposal will be returned unopened.
  - b. Requests for withdrawal of proposals after opening of such proposals but prior to award shall be transmitted to the City Purchasing Manager, in writing, accompanied by full documentation supporting the request. If the request is based on a claim of error, documentation must show the basis of the error. Such documentation may take the form of supplier quotations, vendor work sheets, etc. If bid bonds were tendered with the proposal, the Owner may exercise its right to collection.
- 1.7.2 A Bidder who is permitted to withdraw a proposal shall not supply any material, labor or perform any subcontract or other work agreement for any type of compensation for the person or firm to whom the contract is awarded. A Bidder who is permitted to withdraw a proposal shall not otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn proposal was submitted.

## **1.8 ERRORS IN PROPOSALS**

- 1.8.1 When an error is made in extending total prices, the unit proposal price will govern. Corrections in proposals must be initialed by an authorized representative. Carelessness in quoting prices or in preparation of the proposal will not relieve the Bidder from performance. Bidders are cautioned to recheck their proposal for possible error. Errors discovered after public opening cannot be corrected and the Bidder will be required to perform if their proposal is accepted.

## **1.9 BIDDER'S PRESENT**

- 1.9.1 All proposals will be publicly opened and read at the time and place specified and will remain available for public inspection in the Office of the Purchasing Manager during regular City business hours for a period not less than thirty (30) calendar days after date of opening. Proposals may also be viewed on the City web site at <http://www.provo.org>.
- 1.9.2 Abstracts or tabulation of proposals received are not prepared for public distribution. Proposal results may be obtained at a reasonable cost. Information that is proprietary may not be obtained.

## **1.10 ACCEPTANCE / AWARD OF PROPOSALS**

- 1.10.1 All proposals submitted shall be binding for thirty (30) calendar days following the opening date, unless extended by mutual consent of all parties.
- 1.10.2 Unless otherwise specified by the City Purchasing Manager or his representative, the Purchasing Manager reserves the right to make award on all items or on all of the items which is in the best interests of the City.
- 1.10.3 Provo City is exempt from the payment of any federal excise or any Utah sales tax. The price must be net, exclusive of taxes. However, when under established trade practice any federal excise tax is included in the list price Bidder may quote the list price and shall show separately the amount of federal tax, either as a flat sum or as a percentage of the list price, which shall be deducted by the City.
- 1.10.4 Any proposal in which the Bidder names a total price for all the articles without quoting a unit price for each and every separate item may not be considered for award. Unit prices submitted will be totaled by Provo City representatives in order to determine lowest responsive price.
- 1.10.5 Proposals will be awarded to the lowest responsive and responsible Bidder. The determination of the lowest responsive and responsible Bidder may involve all or some of the following factors but not be limited to: price, Vendor Evaluation Report, handling, storage, disposal costs, installation, conformity to specifications, financial

ability to meet the contract, previous performance, facilities, equipment, experience, delivery promise, terms of payments, compatibility as required, other costs, and other objective and accountable factors.

- 1.10.6 The Purchasing Manager shall encourage open and competitive bidding by all possible means and shall endeavor to obtain the maximum degree of open competition on all purchase transactions using the competitive sealed proposals, competitive negotiation, or open market transaction methods of procurement. In submitting a proposal, each Bidder shall by virtue of submitting a proposal guarantee that the Bidder has not been a party with other Bidder to an agreement to propose a fixed or uniform price. Violation of this implied guarantee shall render void the proposal of such Bidders. Any disclosure to or acquisition by a competitive Bidder in advance of the opening of the proposals, of the terms or conditions of the proposal submitted by another competitor shall render the entire proceedings void and shall require re-advertising for proposals.
- 1.10.7 Owner reserves the right, in case of Vendor default, to procure the services and/or material from other sources while holding the defaulting Vendor responsible for any excess costs occasioned thereby.

### **1.11 EVALUATION PROCESS AND SELECTION CRITERIA**

The Owner's evaluation committee will judge the merit of all proposals received in accordance with the general evaluation criteria listed below. Failure to provide any of the information requested may result in the proposal being removed from further consideration. In determining lowest responsible bidder, in addition to **PRICE**, the Owner will consider:

- a. The ability, capacity, and skill of the Offeror to perform the services required under the contract;
- b. Whether the Offeror can provide the services promptly, or within the time specified, without delay or interference;
- c. The character, integrity, reputation, judgment, experience, and efficiency of the Offeror;
- d. The quality of service and level of performance of Offeror under previous contracts, if any;
- e. The previous and existing compliance by the Offeror with laws and ordinances relating to the contract or service; and
- f. Whether the Offeror is in arrears to the Owner on a debt or contract or is in default on surety, or whether the Offeror's taxes or assessments are delinquent.
- g. Other relevant information, which the Owner feels, would help in the evaluation of their proposal.

### **1.12 RIGHT OF OWNER TO TERMINATE CONTRACT**

Owner, upon written notice, may terminate this Contract, or any part hereof, as a result of the Contractor's failure to render to the satisfaction of Owner, the material, work and/or services required of it, including progress of the work and such abandonment or termination shall not be deemed a breach by Owner. Owner shall be the sole determinant in all termination for cause issues. The Contractor shall not be entitled, nor shall Owner give any consideration to claims for any costs or for loss of anticipated revenue(s), including overhead and profit, due to the abandonment or termination of this Contract, or any part hereof, by Owner for cause.

Owner, upon written notice, may abandon or terminate this Contract or any part hereof, and such action shall in no event be deemed a breach of this Contract. Such termination may come about for the sole convenience of Owner. Upon receipt of written notification from Owner that this Contract, or any part hereof, is to be terminated, the Contractor shall immediately cease operation of the work stipulated, and assemble all material that has been prepared, developed, furnished or obtained under the provisions of this Contract that may be in its possession or custody, and shall transmit the same to Owner on or before the fifteenth day following the receipt of the above-written notice of termination, together with its evaluation of the cost of the work performed. The Contractor shall be entitled to just and equitable payment in accordance with this Contract for any uncompensated work satisfactorily performed prior to such notice.

Owner shall determine the amount of work satisfactorily performed by the Contractor and Owner's evaluation shall be used as a basis to determine the amount of compensation due the Contractor for this work.

Termination by Owner for cause, default, or negligence on the part of the Contractor shall be excluded from the foregoing provision; termination costs shall not apply. Owner reserves the right to make award on all items, or on all of the items, which are in the best interests of the Owner.

### **1.13 DISCLOSURE OF PROPOSAL CONTENT**

- 1.13.1 The Government Records Access and Management Act, Code Section 3.13.010 et seq., Provo City Ordinance ("GRAMA") states that certain information in the submitted Proposal may be open for public inspection. If the

Firm desires to have information contained in its proposal protected from such disclosure, the Firm may request such treatment by providing a "written claim of business confidentiality and a concise statement of reasons supporting the claim of business confidentiality" with the Proposal (GRAMA, Code Section 3.13.308, Provo City Ordinance). All material contained in and/or submitted with the Proposal becomes the property of Provo and may be returned only at Owner's option.

#### **1.14 INDEMNIFICATION**

1.14.1 To the fullest extent permitted by law, the Seller shall indemnify and hold harmless Provo City from and against any claims and all liabilities, liens, costs, damages, citations, penalties, fines, attorney's fees, losses or expenses from whatever nature (collectively "claims") arising out of or resulting from performance of (or failure to perform) the Work under this agreement, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of property (other than to the Work itself) including loss of use resulting there from, but only to the extent caused in whole or in part by negligent acts or omissions of the seller, the Sellers sub-contractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified there under. Such obligation shall not be construed to negate, abridge, or otherwise reduce other rights or obligations if indemnity which would otherwise exist as to a party or person described in this paragraph.

#### **1.15 INSURANCE**

1.15.1 Contractor shall provide the following minimum insurance coverage from companies holding a General Rating of "A" or better as set forth in the most current issue of Best's Key Rating Insurance Guide written for not less than the following, or greater if required by law and all such insurance to be primary to any insurance maintained by Owner, shall name Owner as additional insured with waiver of subrogation:

- a. The Contractor's Worker's Compensation Insurance shall be written for not less than the statutory limits for the locale of the Project and the Contractor's Employer's Liability Insurance shall be written for not less than \$2,000,000.
- b. The Contractor's Comprehensive Automobile Liability Insurance shall be written with combined single limits of not less than \$2,000,000 each occurrence.
- c. The Contractor's Comprehensive General Liability Insurance with contractual liability coverage on occurrence form with limits not less than \$2,000,000 each occurrence. Completed Operations insurance must be kept in effect for 2 years after completion of work.
- d. The Contractor shall not commence Work under this Agreement until all of the insurance required herein shall have been obtained by the Contractor. The Contractor shall furnish to the Owner Certificates of Insurance verifying that such insurance has been obtained. Such certificates will provide that Owner will receive at least thirty (30) days prior written notice of any material change in, cancellation of, or non-renewal of such insurance.

#### **1.16 INVOICING**

1.16.1 Provo City shall make payment to Bidder for all services performed by Bidder pursuant to this Agreement. Bidder shall submit a written invoice, for services rendered and Provo City shall pay the invoice fee within thirty (30) days.

#### **1.17 LIQUIDATED DAMAGES**

The Vendor agrees to deliver product as quoted in this proposal. Failure to deliver as quoted constitutes an event of default. The actual damages to Owner for the delay will be difficult or impossible to determine. Therefore, in lieu of actual damages, the Bidder shall pay to Owner, liquidated damages for each calendar day of delay, an amount of \$75.00 per day, up to a maximum of sixty (60) calendar days. Should the vendor be unable to complete the delivery at the end of the sixty (60) day period, Owner, at its option, may treat the contract as breached, terminate the contract, purchase substitute product else-where, and charge the full increase, if any, in cost and handling for such purchase to the defaulting vendor, and seek such additional relief as provided by law. The vendor shall not be charged for liquidated damages when delay arises out of causes beyond control and without the fault or negligence of the vendor.

#### **1.18 SILENCE OF SPECIFICATIONS**

The apparent silence of specifications as to any detail, or the apparent omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and that only material and

workmanship of the finest quality are to be used. All interpretations of specifications shall be made on the basis of this statement. The items furnished under this contract shall be new, unused of the latest product in production to commercial trade and shall be of the highest quality as to materials used and workmanship. Manufacturer furnishing these items shall be experienced in design and construction of such items and shall be an established supplier of the item bid.

### **1.19 NON-DISCRIMINATION AND EQUAL OPPORTUNITY**

Bidder agrees to comply with all federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§ 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of handicaps and the Americans with Disabilities Act of 1990; (d) the Age Discrimination Act of 1974, as amended (42 U.S.C. §§ 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to the nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§ 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (I) any other nondiscrimination provisions in any specific statute(s) applicable to any Federal funding for this Agreement; and (j) the requirements of any other nondiscrimination statute(s) which may apply to this Agreement.

### **1.20 LAWS AND ORDINANCES**

The laws of the State of Utah shall govern any contract executed between the successful Contractor and Owner. Further, the place of performance and transaction of business shall be deemed to be in the County of Utah, State of Utah, and in the event of litigation, exclusive venue and place of jurisdiction shall be the State of Utah, and more specifically, the district court of Utah County, Utah.

### **1.21 PATENTS**

The Contractor hereby agrees to defend, indemnify and hold harmless the Owner from and against any and all liability, loss, or damage and to reimburse the Owner from and against any cost or expense to which the Owner may be put because of claims or litigation on account of infringement or alleged infringement of any letters, patent or patent rights, or copyright by reason of the services, work, processes, materials, equipment or other items used by the Contractor in its performance of this agreement. Final payment to the Contractor by Owner will not be made while any suit or claim remains unsettled.

### **1.22 CONFIDENTIAL MATTERS**

All data and information gathered by the Contractor, and all reports, recommendations, documents, and data shall be treated by the Contractor as confidential. The Contractor must agree not to communicate and disclose the aforesaid matters to a third party or use them in advertising, publicity, or propaganda and/or in another job or jobs, unless prior written consent is obtained from Owner.

### **1.23 FORCE MAJEURE**

“FORCE MAJEURE” shall be considered to be an act of God, fire, or explosion that, due to its consequences, threatens to delay the timely performance of the parties’ obligations hereunder. Whenever either party has knowledge of any event of Force Majeure or other situation that is delaying or threatens to delay the timely performance of any obligation called for by this Contract, that party shall immediately give written notice thereof, including all relevant information with respect thereto, to the other party.

Neither party to this Contract shall be liable for delay or failure to perform pursuant to the terms of this Contract, if and to the extent such delay or failure is due to the event of Force Majeure as defined above provided that:

- 1.23.1** Neither party may claim the benefit of this section unless the delay or failure to perform is due to causes beyond its control and without its fault or negligence; and
- 1.23.2** Any delay or failure by a Contractor or subcontractor at any tier of either party shall not be excusable unless such delay or failure arises out of causes beyond the control of Contractor, and the services to be

furnished by Contractor or subcontractor are not obtainable from other sources at comparable costs in sufficient time to permit its commitments to be met pursuant to this Contract.

## **1.24 CHANGE ORDER**

The Owner may, at any time, increase the quantity of items ordered and purchased without an additional increase in the Bid Price per item and according to the other terms and conditions of this agreement. The approximate quantities are not binding as they are an approximate quantity. Any decreases in the quantity and/or changes in scope or description of the material shall be negotiated between the Owner and the Contractor. This shall not affect the validity of the contract or any terms or conditions not changed thereby.

## **SECTION 2: SHIPPING/DELIVERY**

### **TIME IS OF THE ESSENCE FOR EACH DELIVERY.**

It shall be the responsibility of the Bidder to insure that the Manufacturer complies with these instructions for items that are drop-shipped.

All items shall be bid F.O.B. Destination. The term F.O.B. Destination shall mean delivered, unloaded, with all charges for transportation and unloading paid by the contractor. All items must be packaged so as to be protected from damage during shipping and handling. Any item(s) damaged in shipping must be replaced in kind, or repaired, by the contractor, at the discretion of Owner and at no additional charge to Owner.

All shipping costs must be included in the cost bid from Offerer.

Any claim for loss or damage shall be between the Contractor and the carriers.

### **48 hour notice of delivery. Closed Fridays.**

## **2.1 PRICING**

Prices for all goods and/or services shall be firm for the duration of this contract and shall be stated on the Pricing/Delivery Information form. Prices shall be all inclusive: No price changes, additions, or subsequent qualifications will be honored during the course of the contract. All prices must be written in ink or typewritten.

Pricing on all transportation, freight, drayage and other charges are to be prepaid by the contractor and included in the bid prices. If there are any additional charges of any kind, other than those mentioned above, specified or unspecified, Offeror MUST indicate the items required and attendant costs or forfeit the right to payment for such items.

**Section 3** specifies approximate yearly quantities and are not binding. Any applicable price break schedules should be attached to the bid for consideration in the evaluation process. Freight will be considered as part of the price.

## **2.2 FAILURE TO DELIVER**

In case of failure to deliver services in accordance with the Contract terms and conditions, the Owner, after due oral or written notice, may procure the services from other sources and hold the Contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies which the Owner may have. The Owner shall be entitled to offset such costs against any sums owed by the Contractor to the Owner under this Contract.

**2.2.1** Only specified material and/or qualified equivalents accepted. *Bidder's must submit transformer specifications and drawings with bid. Transformers that do not meet Provo City specifications may be rejected and may affect any and all future bids with such Offeror.* Any submissions of proposed equivalents must be submitted prior to bid opening. A committee of at least three will be set up to review such submissions and will notify Offeror prior to bid opening of acceptance of submissions.

**2.2.2** Manufacturer, part and/or catalog numbers are required information on bid document and will be disqualified if such information is not supplied at the discretion of the Owner. Submitting more than one manufacturer, part and/or catalog number must be noted on bid document provided they are approved. The Owner may reject any manufacturer, part and/or catalog number in the best interests of the Owner.

**2.2.3** After bid is awarded material supplied must be what was submitted on bid and accepted as an equivalent by Owner prior to bid opening. Failure to do so the Owner reserves the right to reject portions and/or all of Offeror's bid and may affect any and all future bids with such Offeror.

### **2.3 MATERIAL SAFETY DATA SHEETS**

Under the "Hazardous Communication Act", commonly known as the "Utah Right To Know Act", a Contractor must provide to Owner with each delivery, material safety data sheets which are applicable to hazardous substances defined in the Act. Failure of the Contractor to furnish this documentation will be cause to reject any bid applying thereto.

### **2.4 ESCALATION/DE-ESCALATION CLAUSE**

**Bids submitted with an escalation clause shall indicate the specific items and/or materials subject to escalation or de-escalation, and specify the method and indices to be used in computing the amount thereof. The bidder shall *clearly* outline the current pricing, associated ordering deadline, and delivery date for the current pricing. Escalation occurring after the quoted delivery date will not be paid unless delays are the result of actions by the City.**

**SECTION 3: BID FORM (see Attachment A Excel spreadsheet to be filled out by bidder)**

### **SECTION 4: SPECIFICATIONS**

#### **4.1 DRAWINGS AND SPECIFICATION SHEETS**

*Submit transformer specifications and drawings along with bid. Transformers that do not meet Provo City specifications will be rejected and may affect any and all future bids with such Offeror and/or manufacturer.*

#### **4.2 PROVO CITY TRANSFORMER SPECIFICATION CHANGES AS OF 2005**

4.2.1 Three (3) straight bar, 6 conductor, #12 to 350MCM bolt on low voltage bushings for 5/8 inch threaded transformer stud with clear cover on the single phase pad mounted transformers.

4.2.2 All single phase and three phase pad mounted transformers shall have a duplicate external name plate with all information as the internal name plate, to be positioned at the highest point possible on the front of the transformers.

#### **4.3 PROVO CITY TRANSFORMER SPECIFICATION CHANGES AS OF 2008**

4.3.1 All three phase transformers to have on low voltage side 8 hole copper tin-plated transformer stud adapters, NEMA pad style, heavy duty (thicker than 1/4").

4.3.2 Provide suggestions on enlarging secondary compartment of transformer without compromising low profile design.

**PROVO CITY POWER  
ENGINEERING DIVISION  
STANDARDS**

**DISTRIBUTION TRANSFORMER SPECIFICATION  
SINGLE PHASE, POLE MOUNT 120/240  
10 kVA - 500 kVA**

February 2007

**Scope**

This specification states the electrical characteristics and the mechanical and security features of Non-PCB, single phase, 60-Hz, mineral-oil-filled, self-cooled, pole mount distribution transformer 10 kVA thru 500 kVA to be purchased by Provo City Power.

**General**

The manufacturer is responsible for understanding and complying with the specifications as outlined. The manufacturer shall not cause to be delivered to Provo City Power any transformer that does not meet or exceed the provisions and requirements as stated herein.

**Applicable Documents**

The latest revisions of the documents, standards, codes and requirements in effect on the date of invitation to bid apply to the extent specified herein.

**AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)**

ANSI C57.12.00-1993, IEEE Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers.

ANSI C57.12.20-1988, American National Standard for Transformers - Overhead-Type Distribution Transformers, 500 kVA and Smaller: High Voltage, 34 500 Volts and Below; Low voltage, 7970/13 800 Volts and below.

ANSI C57.12.28-1988, American National Standard for Switchgear and Transformers Pad-Mounted Equipment - Enclosure Integrity.

ANSI C57.12.70-1978, American National Standard Terminal Markings and Connections for Distribution and Power Transformers.

ANSI C57.12.90-1993, IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers and Guide for Short-Circuit Testing of Distribution and Power Transformers.

**AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)**

ASTM D92-1990, Standard Test Method for Flash and Fire Points by Cleveland Open Cup

ASTM D877-1987, Standard Test Method for Dielectric Breakdown Voltage of Insulating Liquids Using Disk Electrodes

ASTM D445-1988, Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)

ASTM D2161-1987, Standard Practice for Conversion of Kinematic Viscosity to Saybolt Universal Viscosity or to Saybolt Furol Viscosity

**Ratings**

Kilovolt-ampere ratings shall be as specified for single-phase transformers as per ANSI C57.12.20-1988 Table 1, Rated Voltage to be 7200/12470Y (high voltage) 120/240 (low voltage) or as specified with bid documents. Basic Impulse Insulation Levels (BIL) shall be 95 kV (high voltage) and 30 kV (low voltage).

### **Tap Changer**

Transformers shall be equipped with external tap changing capabilities, two (2) positions up and two (2) positions down from the rated high voltage (7200/12470Y) in increments of 2-1/2%. The handle shall be designed to prevent accidental operation by requiring a preliminary step before the voltage setting can be changed. Actual voltage or position numbers corresponding to the nameplate shall be clearly identifiable near the handle. There shall be located on or adjacent to the operating mechanism a caution to de-energize the transformer before operating.

### **Construction**

Tank color to be transformer light grey. The tank finish on all surface areas shall meet or exceed all ANSI C57.12.28 requirements. Tank shall be equipped with grounding provisions. All transformers must be designed to pass short circuit tests in accordance with ANSI publication C57.12.90 latest revisions. Overall transformer size shall be designed to be as small as possible and still meet all electrical clearance guidelines.

High Voltage:

Two (2) high voltage bushings with automatic pressure relief device. Bushing configuration shall be in accordance with ANSI C57.12.20 Table 7 Figure 10.

Low Voltage:

Three (3) external terminals suitable Series, Multiple or Three wire operation. Bushing configuration shall be in accordance with ANSI C57.12.20 Table 7 Figure 10.

### **PCB Requirement**

The PCB level of oil installed in each transformer shall be less than one part per million (PPM). Each transformer shall have a blue and white NON-PCB label on the outside of the transformer. The label shall certify that the transformer oil contains less than 1 PPM of PCB. The label must be easily visible.

### **Bid/Loss Evaluation**

The guaranteed estimated average no-load and full-load losses for each size kVA transformer must accompany all bids. **Test reports must accompany all units upon delivery.** Units exceeding the estimated average losses (TL) by more than 6% will be rejected at time of delivery.

Provo City Power will evaluate each transformer and award the bid based on Total Owning Cost (TOC) using a cost of \$5.00 per watt for no-load (NL) and \$2.00 per watt for full-load (FL).

Example: **Base Cost + NL watts x \$5.00 + FL watts x \$2.00 = TOC**

Bids may be evaluated on a "Band of Equivalence" which is an evaluation of quoted prices and losses with in a TOC window, with the lowest TOC as the basis. After identifying the lowest aggregate TOC on the bid, all bids within 5% of the lowest TOC will be reviewed for base price. Provo reserves the right to award the bid other than the lowest TOC, within this established window, based on this price review.

Bids may also be awarded on delivery time, manufacturers and suppliers past performance record with Provo City.

**PROVO CITY POWER  
ENGINEERING DIVISION  
STANDARDS**

**DISTRIBUTION TRANSFORMER SPECIFICATION  
SINGLE PHASE, PAD MOUNT 240/120  
25 kVA - 250 kVA**

February 2007

**Scope**

This specification states the electrical characteristics and the mechanical and security features of Non-PCB, single phase, 60-Hz, mineral-oil-filled, self-cooled, pad mount distribution transformer 25 kVA thru 167 kVA to be purchased by Provo City Power.

**General**

The manufacturer is responsible for understanding and complying with the specifications as outlined. The manufacturer shall not cause to be delivered to Provo City Power any transformer that does not meet or exceed the provisions and requirements as stated herein.

**Applicable Documents**

The latest revisions of the documents, standards, codes and requirements in effect on the date of invitation to bid apply to the extent specified herein.

**AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)**

ANSI C57.12.00-1993, IEEE Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers.

ANSI C57.12.25-1990, IEEE Requirements of Pad-Mounted, Compartmental-Type, Self-Cooled, Single-Phase Distribution Transformers with Separable Insulated High-Voltage connectors: Type 2, High-Voltage, 34,500GrdY/19,920 Volts and Below; Low-Voltage, 240/120 Volts; 167 kVA and smaller.

ANSI C57.12.28-1988, American National Standard for Switchgear and Transformers Pad-Mounted Equipment - Enclosure Integrity.

ANSI C57.12.70-1978, American National Standard Terminal Markings and Connections for Distribution and Power Transformers.

ANSI C57.12.90-1993, IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and regulating Transformers and Guide for Short-Circuit Testing of Distribution and Power Transformers.

**AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)**

ASTM D92-1990, Standard Test Method for Flash and Fire Points by Cleveland Open Cup

ASTM D877-1987, Standard Test Method for Dielectric Breakdown Voltage of Insulating Liquids Using Disk Electrodes

ASTM D445-1988, Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)

ASTM D2161-1987, Standard Practice for Conversion of Kinematic Viscosity to Saybolt Universal Viscosity or to Saybolt Furol Viscosity

### Ratings

Kilovolt-ampere ratings shall be as specified for single-phase transformers as per ANSI C57.12.25, 3.1. Rated Voltage to be 12470GrdY/7200 (High Voltage) 240/120 (Low Voltage). Basic Impulse Insulation Levels (BIL) shall be 95 kV (High Voltage) and 30 kV (Low Voltage).

### Tap Changer

Transformers shall be equipped with external tap changing capabilities, two (2) positions up and two (2) positions down from the rated high voltage (12470Grdy/7200) in increments of 2-1/2%. The handle shall be designed to prevent accidental operation by requiring a preliminary step before the voltage setting can be changed. Actual voltage or position numbers corresponding to the nameplate shall be clearly identifiable near the handle. There shall be located on or adjacent to the operating mechanism a caution to de-energize the transformer before operating.

### Construction

Transformers shall meet latest revision of Western Underground Committee Tamper Proof Guideline 2.13. Color to be transformer green. The tank finish on all surface areas shall meet or exceed all ANSI C57.12.28 requirements. All transformers must be designed to pass short circuit tests in accordance with ANSI publication C57.12.90 latest revisions. Overall transformer size shall be designed to be as small as possible and still meet all electrical clearance guidelines.

#### High Voltage:

Transformers to be loop feed, dead front, two (2) high voltage wells with bushing inserts, bayonet drip shield, externally replaceable dual sensing (current and temperature) bayonet fuse, automatic pressure relief devise.

#### Low Voltage: *NEW*

Three (3) straight bar, 6 conductor, #12 to 350MCM wire bolt on low voltage bushings for 5/8 inch threaded transformer stud with clear plastic cover.

#### Name Plate: *NEW*

Duplicate external name plate with all information as the internal name plate, to be positioned at the highest point possible on the front of the transformers.

### PCB Requirement

The PCB level of oil installed in each transformer shall be less than one part per million (PPM). Each transformer shall have a blue and white NON-PCB label on the outside of the transformer. The label shall certify that the transformer oil contains less than 1 PPM of PCB. The label must be easily visible.

### Bid/Loss Evaluation

The guaranteed estimated average no-load and full-load losses for each size kVA transformer must accompany all bids. **Test reports must accompany all units upon delivery.** Units exceeding the estimated average losses (TL) by more than 6% will be rejected at time of delivery.

Provo City Power will evaluate each transformer and award the bid based on Total Owning Cost (TOC) using a cost of \$5.00 per watt for no-load (NL) and \$2.00 per watt for full-load (FL).

Example: **Base Cost + NL watts x \$5.00 + FL watts x \$2.00 = TOC**

Bids may be evaluated on a "Band of Equivalence" which is an evaluation of quoted prices and losses with in a TOC window, with the lowest TOC as the basis. After identifying the lowest aggregate TOC on the bid, all bids within 5% of the lowest TOC will be reviewed for base price. Provo reserves the right to award the bid other than the lowest TOC, within this established window, based on this price review.

Bids may also be awarded on delivery time, manufacturers and suppliers past performance record with Provo City.

**PROVO CITY POWER  
ENGINEERING DIVISION  
STANDARDS**

**DISTRIBUTION TRANSFORMER SPECIFICATION  
THREE PHASE, PAD MOUNT 480/277 AND 208/120  
75 KVA - 2000 KVA**

May 2008

**Scope**

This specification states the electrical characteristics and the mechanical and security features of Non-PCB, Three phase, 60-Hz, mineral-oil-filled, self-cooled, pad mount distribution transformer 75 kVA thru 2000 kVA to be purchased by Provo City Power.

**General**

The manufacturer is responsible for understanding and complying with the specifications as outlined. The manufacturer shall not cause to be delivered to Provo City Power any transformer that does not meet or exceed the provisions and requirements as stated herein.

**Applicable Documents**

The latest revisions of the documents, standards, codes and requirements in effect on the date of invitation to bid apply to the extent specified herein.

**AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)**

ANSI C57.12.00-1993, IEEE Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers.

ANSI C57.12.26-1992, IEEE Requirements of Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers with Separable Insulated High-Voltage connectors: High-Voltage, 34,500GrdY/19,920 Volts and Below; Low-Voltage, 480 and below.

ANSI C57.12.28-1988, American National Standard for Switchgear and Transformers Pad-Mounted Equipment - Enclosure Integrity.

ANSI C57.12.70-1978, American National Standard Terminal Markings and Connections for Distribution and Power Transformers.

ANSI C57.12.90-1987, IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and regulating Transformers and Guide for Short-Circuit Testing of Distribution and Power Transformers.

**AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)**

ASTM D92-1990, Standard Test Method for Flash and Fire Points by Cleveland Open Cup

ASTM D877-1987, Standard Test Method for Dielectric Breakdown Voltage of Insulating Liquids Using Disk Electrodes

ASTM D445-1988, Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)

ASTM D2161-1987, Standard Practice for Conversion of Kinematic Viscosity to Saybolt Universal Viscosity or to Saybolt Furol Viscosity

### Ratings

Kilovolt-ampere ratings shall be as specified for Three-phase transformers as per ANSI C57.12.26, 3.1. Rated voltage to be 12470GrdY/7200 (high voltage), 480Y/277 and 208Y/120 (low voltage). Basic Impulse Insulation Levels (BIL) shall be 95 kV (high voltage) and 30 kV (low voltage).

### Tap Changer

Transformers shall be equipped with external tap changing capabilities, two (2) positions up and two (2) positions down from the rated high voltage (12470Grdy/7200) in increments of 2-1/2%. The handle shall be designed to prevent accidental operation by requiring a preliminary step before the voltage setting can be changed. Actual voltage or position numbers corresponding to the nameplate shall be clearly identifiable near the handle. There shall be located on or adjacent to the operating mechanism a caution to de-energize the transformer before operating.

### Construction

Transformers shall meet latest revision of Western Underground Committee Tamper Proof Guideline 2.13. Color to be transformer green. The tank finish on all surface areas shall meet or exceed all ANSI C57.12.28 requirements. All transformers must be designed to pass short circuit tests in accordance with ANSI publication C57.12.90 latest revisions. Each compartment shall have a door that is constructed so as to provide access to the high-voltage compartment only after the door to the low-voltage compartment has been opened. Overall transformer size shall be designed to be "low profile" or as small as possible and still meet all electrical clearance guidelines as required.

**Outside dimensions (including cooling radiators) of all 3-phase units shall not exceed the following dimensions in inches per Provo City Pad Dimension Specifications:**

<u>KVA</u>	<u>Height</u>	<u>Width</u>	<u>Depth</u>	<u>Pad Size Spec</u>	<u>Pad Opening</u>
75	54	58	58	70x70	17x32
112.5	60	58	58	70x70	17x32
150	60	74	60	86x72	17x42
225	60	74	60	86x72	17x42
300	60	74	60	86x72	17x42
500	60	74	60	86x72	17x42
750	65	90	72	102x76	17x50
1000	72	90	72	102x76	17x50
1500	72	90	72	102x76	17x50
2000	74	90	72	102x76	17x50

#### High Voltage:

Transformers to be loop feed, dead front, two (6) high voltage wells with bushing inserts, bayonet drip shield, externally replaceable dual sensing (current and temperature) bayonet fuse, automatic pressure relief devise.

#### NEW Low Voltage:

All three phase transformers to have on the low voltage side 8 hole copper tin-plated transformer stud adapters, NEMA pad style.

**NEW Name Plate:** Duplicate external name plate with all information as the internal name plate, to be positioned at the highest point possible on the front of the transformers.

#### **Five (5) parking stands.**

### PCB Requirement

The PCB level of oil installed in each transformer shall be less than one part per million (PPM). Each transformer shall have a blue and white NON-PCB label on the outside of the transformer. The label shall certify that the transformer oil contains less than 1 PPM of PCB. The label must be easily visible.

### Three Phase 208/120 Pad Mount Bushing Requirements

Primary bushings on all units shall not exceed maximum heights of 27” for lowest bushing and 36” for highest bushing.

75-500kVA secondary bushings shall not exceed maximum heights of 27” for lowest bushing and 36” for highest bushing.

750-1000kVA secondary bushings shall not exceed maximum heights of 37” for lowest bushing and 45” for highest bushing.

Three Phase 480/277 Pad Mount Bushing Requirements

Primary bushings on all units shall not exceed maximum heights of 27” for lowest bushing and 39” for highest bushing.

112.5-750kVA secondary bushings shall not exceed maximum heights of 29” for lowest bushing and 37” for highest bushing.

1000-2000kVA secondary bushings shall not exceed maximum heights of 46” for lowest bushing and 54” for highest bushing.

Bid/Loss Evaluation

The guaranteed estimated average no-load and full-load losses for each size kVA transformer must accompany all bids. **Test reports must accompany all units upon delivery.** Units exceeding the estimated average losses (TL) by more than 6% will be rejected at time of delivery.

Provo City Power will evaluate each transformer and award the bid based on Total Owning Cost (TOC) using a cost of \$5.00 per watt for no-load (NL) and \$2.00 per watt for full-load (FL).

Example:        **Base Cost + NL watts x \$5.00 + FL watts x \$2.00 = TOC**

Bids may be evaluated on a “Band of Equivalence” which is an evaluation of quoted prices and losses within a TOC window, with the lowest TOC as the basis. After identifying the lowest aggregate TOC on the bid, all bids within 5% of the lowest TOC will be reviewed for base price. Provo reserves the right to award the bid other than the lowest TOC, within this established window, based on this price review.

Bids may also be awarded on delivery time, manufacturers and suppliers past performance record with Provo City.