



RETURN BY EMAIL
AEAProcurement@akenergyauthority.org

Request For Quotation

RFQ NO: **27016**

Quote Due: 2:00 PM AKST
October 27, 2026

Project: **Manokotak** **Distribution** **Transformer Purchase**

Page 1 of 27 Date: October 6, 2026

VENDOR NOTICE (This is NOT a Purchase Order)

This is an informal quotation that will not be read at public opening. The information may be publicly reviewed after award. The terms and conditions should be reviewed and understood before preparing a quotation. The quotation shall be the best net price, FOB destination, to include all delivery charges, but exclude applicable taxes. Delivery schedule and discount for early payment shall be indicated in the spaces provided below. Please return the quotation by the above time and date to the address: AEAProcurement@akenergyauthority.org. Please reference the RFQ number on the SUBJECT of the email.

DELIVERY LOCATION: F.O.B. Southcentral, Alaska

Note that final delivery will be to a contractor's yard in either Anchorage the Mat-Su Borough, final address to be provided prior to shipment.

BUYER: Alaska Energy Authority
Dustin Hendricks, Project Manager
(907) 771-3015

VENDOR QUOTATION

Item	Description of Supply or Service	Qty	Unit	Price
1	Pad Mount Distribution Transformers in Accordance with Appendix C Scope of Work, Appendix D Bid Schedule, and Appendix E Specifications. Fill out Appendix D Bid Schedule with complete unit and extended costs and delivery dates. Submit this page, Appendix D Bid Schedule, Debarment Certificate from Appendix B, Lobbying Certificate from Appendix B, and the Build America, Buy America Certificate from Appendix B	1	LOT	

THIS SECTION MUST BE COMPLETED BY VENDOR

Delivery shall be made _____ calendar days after receipt of order.

Payment Terms: _____

Company Name	Address	City	State	ZIP Code	Phone Number
Alaska Business License No.	Vendor Tax I.D. No.	Do you qualify for the Alaska Bidders' Preference? N/A			
Typed Name and Title: _____ Signature Date		Do you qualify for the Alaska Veteran Preference? N/A			
		Do you qualify for the Military Skills Program Preference? N/A			

**INSTRUCTIONS TO BIDDERS
TERMS AND CONDITIONS**

1. REQUEST FOR QUOTATION (RFQ) REVIEW: Offerors shall carefully review this RFQ for defects and questionable or objectionable material. Offerors' comments concerning defects and questionable or objectionable material in the RFQ must be made in writing and received by the purchasing authority before the date and time set for receipt of quotes. This will allow time for an amendment to be issued if one is required. It will also help prevent the opening of a defective quote, upon which award cannot be made, and the resultant exposure of offerors' prices. Offerors' original comments should be sent to the purchasing authority listed on the front of this RFQ.

2. QUOTATION FORMS: Offerors shall use this and attached forms in submitting quotes. A photocopied quote may be submitted.

3. SUBMISSION: Quotations shall be signed where applicable and received at the designated Purchasing Office no later than as indicated.

4. QUOTE REJECTION: The State reserves the right to reject any or all quotes, combinations of items, or lot(s), and to waive defects or minor informalities.

5. EXTENSION OF PRICES: In case of error in the extension of prices in the quote, the unit prices will govern; in a lot bid, the lot prices will govern. Negligence by the vendor in preparing the quotation confers no right for the withdrawal of the quotation after it has been opened.

6. ALASKA PROCUREMENT CODE: Alaska Energy Authority Procurement for Managed Grants is governed by Code 3 AAC 109 which is a part of this document as if fully set forth herein. Note that 3 AAC 109 is available at <https://www.akleg.gov/basis/aac.asp#3.109>

7. PRICES: The offeror shall state prices in the units of issue on this RFQ. Prices quoted for commodities must be in U.S. funds and include applicable federal duty, brokerage fees, packaging, and transportation cost to the FOB point so that upon transfer of title the commodity can be utilized without further cost. Prices quoted for services must be quoted in U.S. funds and include applicable federal duty, brokerage fee, packaging, and transportation cost so that the services can be provided without further cost. Prices quoted must be exclusive of federal, state, and local taxes. If the offeror believes that certain taxes are payable by the State, the offeror may list such taxes separately, directly below the bid price for the affected item. The State is exempt from Federal Excise Tax except the following:

- Coal - Internal Revenue Code of 1986 (IRC), Section 4121 - on the purchase of coal;
- "Gas Guzzler" - IRC, Section 4064 - on the purchase of low m.p.g. automobiles, except that police and other emergency type vehicles are not subject to the tax;
- Air Cargo - IRC, Section 4271 - on the purchase of property transportation services by air;
- Air Passenger - IRC, Section 4261 - on the purchase of passenger transportation services by air carriers;
- Leaking Underground Storage Tank Trust Fund Tax (LUST) - IRC, Section 4081 - on the purchase of Aviation gasoline, Diesel Fuel, Gasoline, and Kerosene.

8. PAYMENT FOR STATE PURCHASES: Payment for agreements under \$500,000 for the undisputed purchase of goods or services provided to a State agency, will be made within 30 days of the receipt of a proper billing or the delivery of the goods or services to the location(s) specified in the agreement, whichever is later. A late payment is subject to 1.5% interest per month on the unpaid balance. Interest will not be paid if there is a dispute or if there is an agreement which establishes a lower interest rate or precludes the charging of interest.

9. PAYMENT DISCOUNT: Discounts for prompt payment will not be considered in evaluating the price you quote. However, the State shall be entitled to take advantage of any payment discount(s) offered by the vendor provided payment is made within the discount period. Payment discount periods will be computed from the date of receipt of the commodities or services and/or a correct invoice, whichever is later. Unless freight and other charges are itemized, any discount provided will be taken on full amount of invoice.

**INSTRUCTIONS TO BIDDERS
TERMS AND CONDITIONS**

10.VENDOR TAX ID NUMBER: If goods or services procured through this RFQ are of a type that is required to be included on a Miscellaneous Tax Statement, as described in the Internal Revenue Code, a valid tax identification number must be provided to the State of Alaska before payment will be made.

11.INDEMNIFICATION: The Contractor shall indemnify, hold harmless, and defend the contracting agency from and against any claim of, or liability for error, omission or negligent act of the Contractor under this agreement. The Contractor shall not be required to indemnify the contracting agency for a claim of, or liability for, the independent negligence of the contracting agency. If there is a claim of, or liability for, the joint negligent error or omission of the Contractor and the independent negligence of the Contracting agency, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "Contractor" and "Contracting agency", as used within this and the following article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "independent negligence" is negligence other than in the Contracting agency's selection, administration, monitoring, or controlling of the Contractor and in approving or accepting the Contractor's work.

12.SEVERABILITY: If any provision of this contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected; and the rights and obligations of the parties shall be construed and enforced as if the contract did not contain the particular provision held to be invalid.

13.TITLE: Title passes to the State for each item at FOB destination.

14.FILING A PROTEST: An offeror shall attempt to informally resolve a dispute with the procurement officer regarding a small procurement. If the attempt is unsuccessful, the vendor may protest the solicitation or the award of a small procurement contract under AS 36.30.320. The protest must be filed in writing with the commissioner of the purchasing agency or the commissioner's designee and include the following information: (1) the name, address, and telephone number of the protester; (2) the signature of the protester or the protester's representative; (3) identification of the contracting agency and the solicitation or contract at issue; (4) a detailed statement of the legal and factual grounds of the protest, including copies of relevant documents; and (5) the form of relief requested. The protester must file a copy of the protest with the procurement officer for the purchasing agency. Protests will be treated in accordance with AS 36.30.550 and 2 AAC 12.695.

15.COMPLIANCE: In the performance of a contract that results from this RFQ, the contractor must comply with all applicable federal, state, and borough regulations, codes, and laws; and be liable for all required insurance, licenses, permits and bonds; and pay all applicable federal, state, and borough taxes.

16.SUITABLE MATERIALS, ETC.: Unless otherwise specified, all materials, supplies or equipment offered by an offeror shall be new, unused, and of the latest edition, version, model or crop and of recent manufacture.

17.SPECIFICATIONS: Unless otherwise specified in the RFQ, product brand names or model numbers are examples of the type and quality of product required, and are not statements of preference. If the specifications describing an item conflict with a brand name or model number describing the item, the specifications govern. Reference to brand name or number does not preclude an offer of a comparable or better product, if full specifications and descriptive literature are provided for the product. Failure to provide such specifications and descriptive literature may be cause for rejection of the offer.

18.FIRM OFFER: For the purpose of award, offers made in accordance with this RFQ must be good and firm for a period of ninety (90) days from the date of quote opening.

19.QUOTE PREPARATION COSTS: The State is not liable for any costs incurred by the offeror in quote preparation.

20.DISCLOSURE OF QUOTE CONTENTS: This section governs the ownership, return, and disclosure of any offer or other record a bidder submits in response to this request for quotations. (Herein, any reference to "Record" includes all such records and the offer; any reference to "Law" includes any federal or State of Alaska (State) law, including any court or administrative order or rule.)

**INSTRUCTIONS TO BIDDERS
TERMS AND CONDITIONS**

1. All Records belong to the State.
2. The State has sole discretion regarding whether to return any Record. In exercising this discretion, the State will comply with all Laws.
3. Unless a notice of award is issued, the State will, to the extent permitted by Law, consider all Records confidential and not subject to the Alaska Public Records Act (APRA).
4. If, and when a notice of award is issued, the State will consider nonconfidential any Record unless, at the time of submission, the bidder undertook the following protective measures:
 - a. marked information confidential;
 - b. for any information marked confidential, identified the authority that makes that specific information confidential; and
 - c. committed, in writing, to explain in detail, including with affidavits and briefs, why each authority applies in any court or administrative proceeding in which any nondisclosure is challenged.
5. If the bidder did not undertake each protective measure, the State will not consider any information in a Record confidential: the State will disclose the entire Record without any redaction in response to an APRA or other request or, if it chooses, in the absence of a request and the State will disclose the entire Record without notifying the bidder.
6. If the bidder undertook each protective measure, the State will withhold the information marked confidential to the following extent:
 - a. the State agrees that the Law protects the information; and
 - b. if the nondisclosure is challenged, the bidder fulfills its commitment to explain, including with affidavits and briefs, how each authority applies to the information marked confidential.
7. The State will only notify a bidder of a request for the Record and of a planned release if the bidder undertook each protective measure, but the State disagrees that the marked information is protected. If there is such a disagreement, then before releasing the Record, the State will, to the extent permitted by Law and practicable, notify the bidder that it will disclose the information unless the bidder convinces the State not to or obtains an order prohibiting disclosure.

21.CONSolidation OF AWARDS: Due to high administrative costs associated with processing of purchase orders, a single low quote of \$50 or less may, at the discretion of the State, be awarded to the next low offeror receiving other awards for consolidation purposes. This paragraph is not subject to the protest terms enumerated in "FILING A PROTEST" above.

22.CONTRACT FUNDING: Offerors are advised that funds are available for the initial purchase and/or the first term of the contract. Payment and performance obligations for succeeding purchases and/or additional terms of the contract are subject to the availability and appropriation of funds.

23.CONFLICT OF INTEREST: An officer or employee of the State of Alaska may not seek to acquire, be a party to, or possess a financial interest in, this contract if (1) the officer or employee is an employee of the administrative unit that supervises the award of this contract; or (2) the officer or employee has the power to take or withhold official action so as to affect the award or execution of the contract.

24.ASSIGNMENT(S): Assignment of rights, duties, or payments under a contract resulting from this RFQ is not permitted unless authorized in writing by the procurement officer of the contracting agency. Quotes that are conditioned upon the State's approval of an assignment will be rejected as nonresponsive.

25.SUBCONTRACTOR(S): Within five (5) working days of notice from the state, the apparent low bidder must submit a list of the subcontractors that will be used in the performance of the contract. The list must include the name of each subcontractor and the location of the place of business for each subcontractor and evidence of each subcontractor's valid Alaska business license.

**INSTRUCTIONS TO BIDDERS
TERMS AND CONDITIONS**

26.FORCE MAJEURE (Impossibility to perform): The parties to a contract resulting from this RFQ are not liable for the consequences of any failure to perform, or default in performing, any of its obligations under the contract, if that failure or default is caused by any unforeseeable Force Majeure, beyond the control of, and without the fault or negligence of, the respective party. For the purposes of this Agreement, Force Majeure will mean war (whether declared or not); revolution; invasion; insurrection; riot; civil commotion; sabotage; military or usurped power; lightning; explosion; fire; storm; drought; flood; earthquake; epidemic; quarantine; strikes; acts or restraints of governmental authorities affecting the project or directly or indirectly prohibiting or restricting the furnishing or use of materials or labor required; inability to secure materials, machinery, equipment or labor because of priority, allocation or other regulations of any governmental authorities.

27.LATE QUOTES: Late quotes are quotes received after the time and date set for receipt of the quotes. Late quotes will not be accepted.

28.CONTRACT EXTENSION: Unless otherwise provided in this RFQ, the State and the successful offeror/contractor agree: (1) that any holding over of the contract excluding any exercised renewal options, will be considered as a month-to-month extension, and all other terms and conditions shall remain in full force and effect and (2) to provide written notice to the other party of the intent to cancel such month-to-month extension at least thirty (30) days before the desired date of cancellation.

29.DEFAULT: In case of default by the contractor, for any reason whatsoever, the State of Alaska may procure the goods or services from another source and hold the contractor responsible for any resulting excess cost and may seek other remedies under law or equity.

30.DISPUTES: If a contractor has a claim arising in connection with a contract resulting from this RFQ that it cannot resolve with the State by mutual agreement, it shall pursue a claim, if at all, in accordance with the provisions of AS 36.30.620 – 632.

31.GOVERNING LAW; FORUM SELECTION: A contract resulting from this RFQ is governed by the laws of the State of Alaska. To the extent not otherwise governed by section 29 of these Standard Terms and Conditions, any claim concerning the contract shall be brought only in the Superior Court of the State of Alaska and not elsewhere.

32.CONSUMER ELECTRICAL PRODUCT: AS 45.45.910 requires that "...a person may not sell, offer to sell, or otherwise transfer in the course of the person's business a consumer electrical product that is manufactured after August 14, 1990, unless the product is clearly marked as being listed by an approved third party certification program." Electrical consumer products manufactured before August 14, 1990, must either be clearly marked as being third party certified or be marked with a warning label that complies with AS 45.45.910(e). Even exempted electrical products must be marked with the warning label. By signature on this quote the offeror certifies that the product offered is in compliance with the law. A list of approved third party certifiers, warning labels and additional information is available from: Department of Labor, Labor Standards & Safety Division, Mechanical Inspection Section, P.O. Box 107020, Anchorage, Alaska 99510-7020, (907)269-4925.

33.CONTINUING OBLIGATION OF CONTRACTOR: Notwithstanding the expiration date of a contract resulting from this RFQ, the contractor is obligated to fulfill its responsibilities until warranty, guarantee, maintenance and parts availability requirements have completely expired.

34.ORDER DOCUMENTS: Except as specifically allowed under this RFQ, an ordering agency will not sign any vendor contract. The State is not bound by a vendor contract signed by a person who is not specifically authorized to sign for the State under this RFQ. The State of Alaska Purchase Order, Contract Award and Delivery Order are the only order documents that may be used to place orders against the contract(s) resulting from this RFQ.

**INSTRUCTIONS TO BIDDERS
TERMS AND CONDITIONS**

35.BILLING INSTRUCTIONS: Invoices must be billed to the ordering agency's address shown on the individual Purchase Order, Contract Award or Delivery Order. The ordering agency will make payment after it receives the merchandise or service and the invoice. Questions concerning payment must be addressed to the ordering agency.

36.OFFERORS WITH DISABILITIES: The State of Alaska complies with Title II of the Americans with Disabilities Act of 1990. Individuals with disabilities who may need auxiliary aids, services, and/or special modifications to participate in this procurement should contact the procurement officer named on the cover page of this RFQ as soon as possible, but no later than the date and time quotations are due to make any necessary arrangements.

37.COMPLIANCE WITH ADA: By signature of their quote the bidder certifies that they comply with the Americans with Disabilities Act of 1990 and the regulations issued thereunder by the federal government. Services or activities furnished to the general public on behalf of the State must be fully accessible. This is intended to ensure that agencies are in accordance with 28 CFR Part 35 Section 35.130 and that services, programs or activities furnished to the public through a contract do not subject qualified individuals with a disability to discrimination based on the disability.

38.AWARD OF CONTRACT: The Authority reserves the right to reject any and all quotes when such rejection is in the best interest of the State; to reject the bid of a bidder who has previously failed to perform properly, or complete on time, contracts of a similar nature; to reject the bid of a bidder who is not, in the opinion of the Contracting Officer, in a position to perform the contract; and to reject a bid as non-responsive where the bidder fails to furnish the required documents, fails to complete required documents in the manner directed, or makes unauthorized alterations to the bid documents.

- a. A letter of award, if the contract is to be awarded, will be issued to the lowest responsible and responsive bidder as soon as practical and usually within 10 calendar days after opening of quotes.
- b. The successful bidder will be notified of the Authority's intent to award the contract.
- c. The contract will be awarded to the successful bidder following receipt by the Authority of all required documents, properly executed, within the time specified in the intent to award.

39.FEDERAL ASSURANCES: Because this contract is funded with federal funds, the provisions of Appendix B, Federal Assurances, shall apply. When submitting the quote, the vendor shall include the Debarment Certificate from Appendix B and the Lobbying Certificate from Appendix B.

40.COMPLIANCE WITH BABA: The federal funding for this project is subject to the Build America, Buy America Act and therefore this purchase must comply with Buy America Preferences for Infrastructure Projects, 2 CFR 184. B, paragraph B.13 for explanation of requirements. When submitting the quote, the vendor shall include the Build America, Buy America Certificate from Appendix B.

APPENDIX B – FEDERAL ASSURANCES

Because this contract is funded with federal funds, the following contract provisions shall apply, where applicable, to all work performed on the contract by the contractor's own organization and by subcontractors. As provided in this Section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions and further require their inclusion in any lower tier subcontracts or purchase orders that may in turn be made. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all applicable Required Contract Provisions.

B.1 BREACHES AND DISPUTE RESOLUTION.

Contracts in excess of \$250,000. Any dispute arising under this Contract which is not disposed of by mutual agreement shall be resolved in accordance with 2 AAC 108.915.

B.2 TERMINATION.

Contracts in excess of \$10,000. This Contract may be terminated by either party upon 10 days written notice if the other party fails substantially to perform in accordance with its terms through no fault of the party initiating the termination ("Default Termination"). If the Authority terminates this agreement, the Authority will pay the Contractor a sum equal to the percentage of Work completed that can be substantiated either by the Contractor to the satisfaction of the Authority, or by the Authority. If the Authority becomes aware of any non-conformance with the Work or this agreement by the Contractor, the Authority will promptly notify the Contractor in writing of the non-conformance. Should the Contractor's Work remain in non-conformance after having received written notification, the percentage of total compensation attributable to the non-conforming Work may be withheld. The Authority may at any time suspend or terminate ("Convenience Termination") this Agreement for its needs or convenience with or without cause upon written notice. In the event of a Convenience Termination, the Contractor will be compensated for all authorized Work and authorized expenditures performed to the date of receipt of written notice of termination plus reasonable expenses. No fee or other compensation will be due for any incomplete portion of the Work.

B.3 EQUAL EMPLOYMENT OPPORTUNITY.

Except as otherwise provided under [41 CFR Part 60](#), **all construction contracts** must include, and all contractors and subcontractors must comply with, the equal opportunity clause provided under [41 CFR 60-1.4\(b\)](#), in accordance with Executive Order 11246, "Equal Employment Opportunity" ([30 FR 12319](#), [12935](#), [3 CFR Part, 1964-1965](#) Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at [41 CFR part 60](#), "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

B.4 DAVIS-BACON ACT, AS AMENDED ([40 U.S.C. 3141-3148](#)).

Construction contracts in excess of \$2,000 are required to comply with the Davis-Bacon Act ([40 U.S.C. 3141-3144](#), and [3146-3148](#)) as supplemented by Department of Labor regulations ([29 CFR Part 5](#), "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must pay wages not less than once a week. **A copy of the current prevailing wage determination issued by the Department of Labor is included in this solicitation.** Contract and subcontract awards must be conditioned upon the acceptance of the wage determination. All suspected or reported violations must be reported to the Federal awarding agency.

B.5 COPELAND “ANTI-KICKBACK” ACT ([40 U.S.C. 3145](#))

Construction contracts in excess of \$2,000 are required to comply with the **Copeland “Anti-Kickback” Act ([40 U.S.C. 3145](#))**, as supplemented by Department of Labor regulations ([29 CFR Part 3](#), “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). Each contractor or subrecipient is prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. All suspected or reported violations must be reported to the Federal awarding agency.

B.6 CONTRACT WORK HOURS/SAFETY STANDARDS ACT ([40 U.S.C. 3701-3708](#)).

Construction contracts in excess of \$100,000 that involve the employment of mechanics or laborers are required to comply with [40 U.S.C. 3702](#) and [3704](#), as supplemented by Department of Labor regulations ([29 CFR Part 5](#)). Under [40 U.S.C. 3702](#) of the Act, each contractor is required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of [40 U.S.C. 3704](#) are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

B.7 RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT.

If the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient or subrecipient must comply with the requirements of [37 CFR Part 401](#), “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.

B.8 CLEAN AIR ACT ([42 U.S.C. 7401-7671q](#).) AND THE FEDERAL WATER POLLUTION CONTROL ACT ([33 U.S.C. 1251-1387](#)), AS AMENDED

Contracts in excess of \$150,000 are required to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act ([42 U.S.C. 7401-7671q](#)) and the Federal Water Pollution Control Act as amended ([33 U.S.C. 1251-1387](#)). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

B.9 DEBARMENT AND SUSPENSION (EXECUTIVE ORDERS 12549 & 12689)

A contract award **greater than or equal to \$25,000** (see [2 CFR 180.220](#)) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at [2 CFR 180](#) that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” **Contractors that apply or bid for an award exceeding \$25,000 must sign and submit the attached “Debarment” certification with their bid.**

B.10 BYRD ANTI-LOBBYING AMENDMENT ([31 U.S.C. 1352](#))

Each contractor and subcontractor must certify that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or

employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by [31 U.S.C. 1352](#). Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Disclosures shall be forwarded from tier to tier up to the Authority. **Contractors that apply or bid for an award exceeding \$100,000 must sign and submit the attached “Lobbying” certification with their bid.**

B.11 PROCUREMENT OF RECOVERED MATERIALS.

A state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at [40 CFR part 247](#) that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, **where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000**; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

B.12 PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT.

Contractors and subcontractors are prohibited from entering into a contract (or extending or renewing a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in [Public Law 115-232](#), section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). See [§ 200.216](#).

B.13 DOMESTIC PREFERENCES FOR PROCUREMENTS.

As appropriate and to the extent consistent with law, and to the greatest extent practicable, Contractor's are required to provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all contracts and purchase orders for work or products under this award. See [§ 200.322](#).

The federal funding for this project is subject to the Build America, Buy America Act and therefore this purchase must comply with Buy America Preferences for Infrastructure Projects, [2 CFR 184](#). Note that the Rural Utilities Service (RUS) Buy America Compliance requirements, including the applicable trade agreement, are specified under Appendix B-RUS.

DEBARMENT, SUSPENSION, INELIGIBILITY & VOLUNTARY EXCLUSION – 2 CFR 200.214; Executive Orders 12549 and 12689 [Applicable to all federally assisted contracts which exceed \$25,000]

Instructions for Certification:

1. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective contractor and lower tier participants knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the Authority may pursue available remedies, including suspension and/or debarment.
2. The prospective contractor and lower tier participants shall provide immediate written notice to the Authority if at any time the prospective contractor and lower tier participants learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
3. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "persons," "lower tier covered transaction," "principal," "proposal," and voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Orders [12549](#) and 12689. You may contact the Authority for assistance in obtaining a copy of those regulations.
4. The prospective contractor and lower tier participants agrees by submitting this bid or proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized in writing by the Authority.
5. The prospective contractor and lower tier participants further agrees by submitting this bid or proposal that it will require the language of this certification be included in all subcontracts and all lower tier participants shall certify compliance with this requirement.
6. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Non-procurement List issued by U.S. General Service Administration.
7. Nothing contained in the foregoing shall be construed to require establishment of system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
8. Except for transactions authorized under Paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to all remedies available to the Federal Government, the Authority may pursue available remedies including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion Lower Tier Covered Transaction

(1) The prospective contractor and lower tier participants certifies, by submission of this bid or proposal, that neither it nor its "principals" is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) When the prospective contractor and lower tier participants is unable to certify to the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The Contractor, _____ certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 2 CFR §180 apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official: _____

Name and Title of Contractor's Authorized Official: _____

Date: _____

CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING - 31 USC §1352

[Applicable to all federally assisted contracts and to all related subcontracts which exceed \$100,000]

A bidder must submit to the Authority the below certification with its bid response for any federally assisted contract that exceeds \$100,000. Bids that are not accompanied by a completed certification may be rejected as nonresponsive.

1. The undersigned Contractor certifies, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and **submit Standard Form-LLL, "Disclosure Form to Report Lobbying,"** in accordance with its instructions.

2. The undersigned also agrees that he or she shall require that the language of this certification be **included in all lower tier subcontracts, which exceed \$100,000** and that all such recipients shall certify and disclose accordingly.

3. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 USC 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, _____ certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 USC 3801, *et seq.*, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official: _____

Name and Title of Contractor's Authorized Official: _____

Date: _____

BUILD AMERICA, BUY AMERICA ACT PREFERENCES FOR INFRASTRUCTURE PROJECTS – 2 CFR 184; Executive Order 14005 [Applicable to federally assisted infrastructure contracts which exceed \$250,000]

The Contractor acknowledges that it understands the goods and services under this Agreement are funded with federal monies subject to statutory requirements known as “Build America, Buy America” that requires all of the iron and steel, manufactured products, and construction materials used in the Project to be produced in the United States (“Build America, Buy America requirements”).

The Contractor hereby represents and warrants to the Authority and the Federal Awarding Agency:

(a) the contractor has reviewed and understands the Build America, Buy America requirements,

(b) all of the iron and steel, manufactured products, and construction materials used in the Project will be produced in the United States in a manner that complies with the Build America, Buy America requirements, unless a waiver of the requirements is approved, and

(c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the Build America, Buy America requirements, as may be requested by the Authority or the Federal Awarding Agency.

Notwithstanding any other provision of this Agreement, any failure to comply with these requirements by the Contractor shall permit the Authority to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Authority resulting from any such failure or any damages owed to the Federal Awarding Agency by the Authority. Neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without prior written consent of the Authority.

The Contractor, _____ certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 2 CFR §184 apply to this certification and disclosure, if any.

Signature of Contractor’s Authorized Official: _____

Name and Title of Contractor’s Authorized Official: _____

Date: _____

End of Federal Assurances

USDA-RUS BABA COMPLIANCE**PART 1 – GENERAL****1.1 SUMMARY**

- A. This Section includes requirements for compliance with **USDA Rural Utilities Service (RUS) Build America, Buy America Act (BABA) requirements** applicable to RUS-funded infrastructure projects.
- B. The RUS funding for this Project is subject to the following compliance documentation requirements and procedures for:
 - 1. Rural Electrification Act of 1936, as amended (RE Act).
 - 2. Section 401 of the Rural Electrification Act of 1936, as amended (7 U.S.C. §903 note), 7 CFR Part 1787, and the current RUS/USTR Eligible Countries List.
 - 3. Build America, Buy America Act (BABA), including applicable waivers.
- C. This Section establishes documentation procedures for Vendor demonstration of compliance with Buy America requirements applicable to iron, steel, manufactured products, and construction materials.
- D. For USDA-RUS projects authorized under Section 19 of the RE Act, RUS recognizes the role of existing international trade agreements in implementing BABA. Products from countries determined eligible by the United States Trade Representative (USTR) under the RE Act are afforded the treatment provided by the applicable RE Act §401 and 7 CFR Part 1787 framework, subject to applicable contract-value thresholds and other restrictions.

1.2 COMPLIANCE BASIS

- A. AEA documents BABA compliance for this USDA-RUS-funded Project through the following chain of applicable requirements:
 - 1. HECG is authorized under Section 19 of the Rural Electrification Act (RE Act).
 - 2. Section 401 of the RE Act (7 U.S.C. §903 note) authorizes USTR to determine countries eligible for reciprocal treatment under international procurement agreements.
 - 3. For this Project, AEA uses the RUS Eligible Countries List published March 26, 2025 (90 FR 13729) as the common solicitation and Contract basis.
 - 4. Products from an RUS Eligible Country are afforded the same treatment as U.S.-produced products, subject to applicable thresholds and restrictions.
 - 5. RUS has advised AEA that, for HECG funding, this RE Act eligible-country treatment is recognized in implementing BABA requirements.

1.3 RELATED REQUIREMENTS

- A. Appendix B Federal Assurances

1.4 REFERENCES

- A. Rural Electrification Act of 1936, as amended

- B. Section 401 of the Rural Electrification Act of 1936, as amended (7 U.S.C. §903 note)
- C. 7 CFR 1787
- D. USDA Rural Utilities Service, Notice of Publication of RUS List of Eligible Countries, March 26, 2025 (90 FR 13729)

1.5 DEFINITIONS

- A. **RUS Eligible Country** - A country identified as eligible for RUS Electric Program awardees in the USDA Rural Utilities Service Notice of Publication of RUS List of Eligible Countries dated March 26, 2025 (90 FR 13729), subject to applicable thresholds and restrictions.
- B. **RUS Buy America Compliant Product** - A product that is manufactured in the United States or listed RUS Eligible Country that complies with Section 1.6.A, below.

1.6 RUS COMPLIANCE REQUIREMENTS

- A. A RUS Buy America Compliant Product shall:
 - 1. Be manufactured in the United States or an RUS Eligible Country identified in the March 26, 2025 RUS Eligible Countries List for Electric Program awardees.
 - 2. Contain components manufactured in the United States or applicable RUS Eligible Countries consisting of more than 50 percent of the total cost of all components used in the product, in accordance with 7 CFR Part 1787.

For purposes of this solicitation and Contract, the March 26, 2025 RUS Eligible Countries List reproduced below shall be the common basis for Buy America compliance. If RUS subsequently revises the Eligible Countries List, the Authority will incorporate the revision into the RFQ or Contract Documents, as applicable.

RUS Electric Program Eligible Countries (March 26, 2025):

Armenia, Aruba, Australia, Austria, Bahrain, Belgium, Bulgaria, Canada, Chile, Chinese Taipei, Colombia, Costa Rica, Cyprus, Czech Republic, Denmark, Dominican Republic, El Salvador, Estonia, Finland, France, Germany, Greece, Guatemala, Honduras, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Mexico, Moldova, Montenegro, Morocco, Netherlands, New Zealand, Nicaragua, North Macedonia, Norway, Oman, Panama, Peru, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, South Korea, Spain, Sweden, Switzerland, Ukraine, and United Kingdom.

- B. Products originating in countries that are not on the March 26, 2025 RUS Eligible Countries List for Electric Program awardees shall not be incorporated into the Work furnished unless specifically approved by the Authority under an applicable waiver or other written RUS authorization.
- C. Eligibility under an international trade agreement may be subject to contract-value thresholds, product coverage, or other agreement-specific restrictions. The Contractor Vendor shall provide documentation sufficient for the Authority to verify eligibility under the applicable RUS requirements.

1.7 CONTRACTOR VENDOR DOCUMENTATION REQUIREMENTS

The Contractor Vendor shall track products incorporated into the Project and obtain and maintain Manufacturer Compliance Certifications, or equivalent supporting manufacturer documentation acceptable to the Authority, sufficient to demonstrate compliance with applicable RUS Buy America and BABA requirements under Section 401 of the RE Act (7 U.S.C. §903 note) and 7 CFR Part 1787, including any applicable waiver documentation.

1.8 SUBMITTALS

Submit the following prior to delivery of materials:

- A. **Manufacturer BABA Compliance Certification** – Obtain and maintain a USDA RUS Manufacturer BABA Compliance Certification, or equivalent supporting manufacturer documentation acceptable to the Authority, sufficient to document compliance with the requirements of Section 1.6 for each product.

PART 2 – PRODUCTS (NOT USED)**PART 3 – EXECUTION****3.1 COMPLIANCE VERIFICATION**

- A. Authority or Authority's Representative may audit Vendor records at any time.
- B. The Vendor shall maintain documentation for **minimum five years after project completion**.
- C. Materials lacking proper documentation may be rejected.

3.2 NON-COMPLIANT MATERIALS

- A. If non-compliant materials are identified:
 - 1. The Vendor shall replace materials at no additional cost to Authority, or

Attachment A Manufacturer BABA Compliance Certification form follows this appendix. An editable .docx version may be provided to the successful bidder after contract award.

USDA-RUS MANUFACTURER BABA COMPLIANCE CERTIFICATION

Project Name: **Manokotak Distribution System Upgrade**

Project Location: **Manokotak, Alaska, 99628**

USDA/RUS Award Number: **AK0031-F84**

AEA Contract Number: **AEA RFQ 27016**

Certification Statement

The undersigned certifies that the products identified below comply with the applicable USDA Rural Utilities Service (RUS) Build America, Buy America (BABA) requirements in accordance with 7 CFR 1787 and as established in Appendix B-RUS of the Contract Documents.

The products identified below:

1. **Are manufactured in the United States or in a listed RUS Eligible Country included in Appendix B-RUS; and**
2. **Contain components manufactured in the United States or in listed eligible countries consisting of more than 50 percent of the total cost of all components used in the product.**

Products Covered

Product Description	Manufacturer	Country of Manufacture

Company Name: _____

Authorized Representative

Printed Name: _____

Signature: _____

Date: _____

SCOPE OF WORK

1. **Scope** – Furnish a pad mount transformer as indicated in Appendix D – Bid Schedule and in accordance with Appendix E – Specifications.
2. **Submittals** – Provide Submittals in accordance with Appendix E – Specifications. Preliminary submittals shall be provided to the Authority within 14 days of contract award.
3. **Testing** – Test transformers and provide certified test reports in accordance with Appendix E – Specifications.
4. **Packaging** – Prepare, package, and label transformers in accordance with Appendix E – Specifications.
5. **F.O.B. Point** – Deliver transformers to a contractor’s yard in either Anchorage or the Mat-Su Borough, final address to be provided prior to shipment. Note that the Authority will issue an ITB for the distribution upgrade work and the selected contractor will receive the transformers.
6. **Delivery Date** – Delivery of all transformers to the F.O.B. Point is desired no later than: **April 1, 2027**. On the Bid Schedule provide firm delivery dates where indicated.

**Manokoatak Distribution Upgrade
Pad Mount Transformer Purchase**

**Alaska Energy Authority RFQ 27016
Appendix D - Bid Schedule**

Item No.	Item Description	Phase	Primary Voltage	Secondary Voltage	Quan	Unit Cost	Extended Cost
1	15 kVA Transformer	Single	7200	240/120	2		
2	25 kVA Transformer	Single	7200	240/120	8		
3	37.5 kVA Transformer	Single	7200	240/120	5		
4	45 kVA Transformer	Single	7200	240/120	5		
5	45 kVA Transformer	Three	12.47/7.2 Grnd Wye	480/277 Grnd Wye	1		
						TOTAL \$	
Firm Delivery Date for Single Phase Transformers:							
Firm Delivery Date for Three Phase Transformers:							

NOTES:

- 1) See Appendix E for equipment specifications.
- 2) See Appendix C for scope of work including requirements for submittals, equipment packaging, etc.
- 3) See Appendix C for F.O.B. point and desired delivery.
- 4) Provide unit cost and extended cost for each item listed above. Provide a total cost for entire order.
- 5) Provide a firm delivery in calendar weeks for each type of commodity where indicated above. Note that a firm delivery significantly later than the desired delivery date may cause a bid to be declared non-responsive.
- 6) For a bid to be considered responsive it must include the following:
 - a) This Bid Schedule completed as indicated.
 - b) The completed ITB response (page 1 of the ITB).
 - c) The completed Debarment Certificate, see Appendix B.
 - d) The completed Lobbying Certificate, see Appendix B.
 - e) The completed Build America Buy America (BABA) Certificate, see Appendix B.

PADMOUNT LIQUID-FILLED UTILITY TRANSFORMERS

PART 1 - GENERAL

1.1 SCOPE

- A. This specification covers electrical characteristics and mechanical safety features of mineral-oil immersed, self-cooled, padmounted transformers with separable insulated high voltage bushings. All characteristics, voltage designations and tests shall be in accordance with the latest editions of the standards specified herein.
- B. Transformers shall be designed in accordance with RUS requirements and shall be of new construction.
- C. The transformers will be non-evaluated units but shall be provided with minimum efficiencies as specified herein.
- D. Quantities and ratings shall be as indicated on the Bid Schedule.
- E. Transformers shall be suitable for step-down service as indicated on the Bid Schedule.

1.2 RELATED REQUIREMENTS – not used

1.3 STANDARDS

All characteristics, definitions, and terminology, except as specifically covered in this specification, shall be in accordance with the latest edition of the following ANSI, IEEE, Department of Energy and NEMA standards.

- C57.12.00: IEEE Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers.
- C57.12.28: IEEE Standard Pad-Mounted Equipment–Enclosure Integrity.
- C57.12.34: IEEE Standard Requirements for Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers (2500 kVA and Smaller) - High Voltage: 34500GrdY/19920 Volts and Below; Low-Voltage: 480 Volt 2500 kVA and Smaller.
- C57.12.35: IEEE Standard Bar Coding for Distribution Transformers and Step-Voltage Regulators.
- C57.12.37: IEEE Standard for the Electronic Reporting of Distribution Transformer Test Data.
- C57.12.38: IEEE Standard for Pad-Mounted-Type, Self-Cooled, Single-Phase Distribution Transformers 250kVA and Smaller: High Voltage, 34,500 GrdY/19920V and Below; Low Voltage, 480/240V and Below.
- C57.12.90: IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers.
- C57.12.91: IEEE Guide for Loading Mineral-Oil-Immersed Transformers and Step-Voltage Regulators.

C57.12.154:	IEEE Standard for the Design, Testing, and Application of Liquid-Immersed Distribution, Power, and Regulating Transformers using High-Temperature Insulation Systems and Operating at Elevated Temperatures.
NEMA TR-1:	Transformers, Regulators and Reactors, Audible Sound Levels for Liquid-Immersed Power Transformers.
NEMA TP-1:	Guide for Determining Energy Efficiency for Distribution Transformers
NEMA TP-3:	Standard for Labeling of Distribution Transformer Efficiency.
NEMA 260:	Safety Labels for Pad-Mounted Switchgear and Transformers Sited in Public Areas.
DOE:	10 CFR Part 431 – Department of Energy – Energy Conservation Program for Commercial Equipment: Distribution Transformers Energy Conservation Standards; Final Rule.
IEEE Std. 386:	IEEE Standard for Separable Insulated Connector Systems for Power Distribution Systems Above 600 Volts,

1.4 SUBMITTALS

Shop Drawings and Product Data: Provide complete submittals in PDF format in accordance with Section 33 05 00 - Common Work Results for Utilities and Division 1. At a minimum, submit the following:

- A. Prior to beginning fabrication submit the following for approval:
 - 1. Complete transformer electrical data, mechanical and layout drawings, and wiring and connection diagrams for each type of transformer provided.
 - 2. Drawings shall indicate the kVA rating, transformer impedance, voltage (both primary and secondary), phase of the transformer, winding connection, and tap changers.
 - 3. Submit nameplate for each size transformer.
- B. Upon completion of fabrication and prior to shipping submit:
 - 1. Provide certified test reports prior to shipment of the transformers. Test reports shall indicate the impedance, no load, and full load loss of each transformer, by serial number, and shall include the transformer efficiency, expressed in percent, of the transformer based on the test procedures required by DOE 10 CFR Part 431. Provide sound level of the transformer in dBA.
 - 2. A statement identifying the amount of PCB in the insulating oil.

1.5 WARRANTY

The failure of any transformer due to defective design, material and/or workmanship within 12 months after being energized shall be repaired or replaced without cost. Any defect in design, material and/or construction discovered within this period shall be corrected at the manufacturer's expense, either by repair or replacement.

PART 2 – PRODUCTS

2.1 RATINGS

A. General:

- | | | |
|----|---------------------------|--|
| 1. | Primary Voltage Rating: | As indicated on the Bid Schedule. |
| 2. | Secondary Voltage Rating: | As indicated on the Bid Schedule. |
| 3. | Frequency: | 60 Hz. |
| 4. | Phase: | Single or three-phase, as indicated on the Bid Schedule. |
| 5. | Impedance: | NEMA Standard. |
| 6. | kVA Rating: | As indicated on the Bid Schedule. |
| 7. | BIL Rating: | 7.2/12.47 kV: 95 kV.
600 Volt and lower: 30 kV. |
| 8. | Temperature Rating: | Self-cooled, 65° C above a 30° C ambient. |

2.2 ACCEPTABLE MANUFACTURERS

Acceptable manufactures shall be as follows.

- A. ABB.
- B. Cooper Power.
- C. Ermco.
- D. G. E. Prolec.
- E. Howard Transformers.
- F. Approved equal.

2.3 TRANSFORMER VOLTAGES

- A. Transformer primary voltage shall be as indicated on the Bid Schedule.
- B. Unless otherwise indicated in the Bid Schedule, transformer secondary voltages shall be as follows:
 - 1. Transformers used for single-phase service shall be provided with a secondary voltage of 240/120 volt, single-phase, 3-wire utilizing the full transformer capacity.
 - 2. Single-phase transformers used as part of a 208/120V three-phase transformer bank shall be rated 120 volts to provide utilization of the full transformer capacity for 208/120 volt, three-phase, 4-wire service.

2.4 EFFICIENCY

The efficiency requirement of DOE 10 CFR part 431.196, for liquid filled transformers, is provided below. Transformers shall meet or exceed the efficiency requirements listed.

Single-phase		Three-phase	
kVA	Efficiency (%)	kVA	Efficiency (%)
10	98.70	15	98.65
15	98.82	30	98.83
25	98.95	45	98.92
37.5	99.05	75	99.03
50	99.11	112.5	99.11

Note: All efficiency values shall be at 50 percent of nameplate-rated load, determined according to the DOE Test-Procedure. 10 CFR Part 431, Subpart K, Appendix A.

2.5 TRANSFORMER LOSSES

- A. Transformer no load and load losses shall be quoted with the transformer bid and shall be guaranteed by the manufacturer. Transformer losses determined by the factory tests on the individual transformers shall not exceed the guaranteed bid losses by more than the following:

Tolerance for Transformer Losses

No-Load Losses (%)	Total Losses (%)
10	6

No individual unit shall be shipped that exceeds guaranteed no load losses by more than 10%.

2.6 TRANSFORMER TAPS

Transformers shall be furnished with four each 2-1/2% full capacity high-voltage taps, 2 above and 2 below rated nominal voltage. The tap changer shall be clearly labeled to reflect that the transformer must be de-energized before operating the tap changer as required in Section 4.3 of IEEE Std C57.12.34.

2.7 THREE-PHASE TRANSFORMER TERMINAL ARRANGEMENTS

- A. Primary bushings shall consist of 200-amp loadbreak inserts in accordance with the following.
- High voltage bushings shall be installed in the high voltage termination compartment located on the front left of the transformer and requiring access via the low voltage termination compartment on the front right.

2. The high voltage bushings shall be 15 kV 200A bushing wells with bushing well inserts installed. The bushings shall be externally removable and be supplied with a removable stud.
 3. The transformer shall be provided with six (6) high voltage bushings in accordance Figure 2 dimensions of IEEE Std C57.12.34 standard for loop feed configurations. The bushing heights shall be in accordance with Figure 3 minimum dimensions of IEEE Std C57.12.34 standard.
 4. A cable accessory parking stand shall be provided and shall be located such that the separable insulated connectors can be operated with hot-line tools.
- B. Secondary terminals:
1. On three-phase transformers with 600 volt, or less, rated secondary windings the secondary terminals shall be provided with tin-plated spade-type bushings for vertical takeoff. The spacing of the connection holes shall be 1.75" on center, per ANSI C57.12.34 Figure 13a. Provide six connection holes.
- C. On transformers provided with a wye-wye connection, the primary neutral connection shall be brought out as a fully insulated H0 bushing in the primary compartment and the low voltage neutral connection shall be brought out as a fully insulated X0 bushing in the secondary compartment. A single H0/X0 bushing will not be acceptable. Provide each bushing with a removable external ground strap connected to a ground pad.

2.8 SINGLE-PHASE TRANSFORMER TERMINAL ARRANGEMENTS

- A. Primary bushings shall consist of 200-amp loadbreak inserts in accordance with the following.
1. The high voltage bushings provided shall be externally clamped bushing wells suitable for loop feed. These wells shall be removable to allow for field replacement of the bushings without opening the tank.
 2. The bushing configuration shall be per IEEE C57.12.38 Figure 3 for ANSI Type II units.
 3. A cable accessory parking stand shall be provided and shall be located such that the separable insulated connectors that are designed for operation after the transformer is in place can be operated with hot-line tools.
- B. Secondary terminals:
1. On single-phase transformers, provide threaded stud-type line and neutral terminals per the table below:

kVA Rating	Thread Size	Minimum Length (Inches)
10-75	0.625-11 UNC-2A	1.25

Length indicated shall be the length of threads prior to any jam nuts, ground straps, or secondary connectors.

2.9 PROTECTION

- A. Bayonet with current limiting fuses. The high-voltage overcurrent protection scheme provided with the transformer shall be an externally removable loadbreak expulsion Bay-O-Net fuse assembly with a flapper valve to minimize oil spillage. The bayonet fuses shall be in series with ELSP under-oil partial-range current-limiting back-up fuses with an interrupting rating of 50,000 RMS symmetrical amperes interrupting with minimum melting current approximately 200% of transformer nameplate rating.

2.10 CORE AND COIL

- A. Windings shall be copper or aluminum. All windings shall meet with the guaranteed temperature rise requirements.
- B. The core shall be manufactured from burr-free, grain-oriented silicon steel and shall be precisely stacked to eliminate gaps in the corner joints. The coil shall be insulated with B-stage, epoxy coated, diamond pattern, insulating paper, which shall be thermally cured under pressure to ensure proper bonding of conductor and paper.
- C. The core and coil shall be vacuum processed to ensure maximum penetration of insulating fluid into the coil insulation system. While under vacuum the transformer shall be filled with preheated filtered degassed insulating fluid.

2.11 TANK AND CABINET

- A. The enclosure integrity of the tank and cabinet shall meet the requirements for tamper resistance set forth in the latest edition of IEEE Std. C57.12.28 including but not limited to the pry test, pull test, and wire probe test.
- B. Enclosures:
 - 1. Three-phase transformers shall be compartmental type with dual compartment and barrier between high and low voltage compartments. The high-voltage and low-voltage compartments, separated by a metal barrier, shall be located side-by-side on one side of the transformer tank. When viewed from the front, the low-voltage compartment shall be on the right. 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. There shall be one or more additional fastening devices that must be removed before the high-voltage door can be opened. Where the low-voltage compartment door is of a flat panel design, the compartment door shall have three-point latching with a handle provided for a locking device. Hinge pins and associated barrels shall be constructed of corrosion-resistant material, passivated AISI Type 304.
 - 2. Single-phase transformers shall be ANSI Type 2 provided with a single lift up door. Door shall be provided with tamper resistant strips.

3. A recessed, captive, silicone bronze or stainless steel penta-head bolt that meets the dimensions per IEEE Std C57.12.28 standard shall secure all access doors. Handles and doors shall be provided with provisions for padlocking.
4. The compartment depth shall be in accordance with IEEE STD C57.12.34 standard, unless additional depth is specified.
5. Transformer enclosures shall be provided with a 304 stainless steel cabinet, door, and sill.
6. All hardware, handles, and hinges shall be 304 stainless steel.
7. Enclosures shall meet ANSI C57.12.28 for enclosure integrity.

C. Tank

1. The transformer tank shall be carbon steel with a 304 stainless steel base. Note that at manufacturer's option the tank may be 304 stainless steel.
2. Bolted main tank cover, where applicable.
3. The tank base shall be designed to allow skidding or rolling in any direction. Lifting provisions shall consist of four lifting lugs welded to the tank.
4. The transformer shall be of sealed tank construction of sufficient strength to withstand a pressure of 7 psig without permanent distortion, and 15 psig without rupturing or affecting cabinet security.
5. The tank shall include a pressure relief device as a means to relieve pressure in excess of pressure resulting from normal operation. The venting and sealing characteristics shall be as follows:
 - a. Cracking pressure: 10psig $\pm$ 2psig.
 - b. Resealing pressure: 6psig minimum.
 - c. Zero leakage from reseal pressure to -8psig.
 - d. Flow at 15 psig: 35 SCFM minimum.

2.12 PAINTING

- A. The transformer unit shall be painted Munsell 7GY3.29/1.5 green. All parts of the transformer shall be painted.
- B. The tank and cabinet coating shall meet all the requirements of the latest edition of IEEE Stud C57.12.28 including:
 1. Salt spray.
 2. Crosshatch Adhesion Test.
 3. Humidity Test.
 4. Impact Test.
 5. Oil Resistance Test
 6. Ultraviolet Accelerated Weathering Test.

7. Abrasion Resistance - Taber Abraser.

2.13 INSULATING OIL

The dielectric coolant in the transformer shall be highly refined Type II inhibited new mineral oil and meet the minimum requirements as specified in Table 1, "Functional Property Requirements," of ASTM D3487 and ANSI C57.106.

2.14 TRANSFORMER AUDIBLE SOUND LEVEL

- A. The padmount transformer shall be designed and constructed to minimize the audible noise generated with the transformer energized at rated voltage.
- B. Standard transformer sound level shall not exceed the values given in Table 2 of the latest edition of NEMA Publication TR1.

2.15 NAMEPLATES & LABELS

- A. Diagrammatic nameplate that conforms to the latest edition of ANSI C57.12.00. Impedance of the transformer shall be included on the nameplate. The nameplate shall be etched and black-filled aluminum or stainless steel. Affix to the enclosure with rivets.
- B. Safety labels shall be provided with each transformer. Safety labels shall meet the latest edition of NEMA Standard No. 260. Labels shall be made of weather resistant material per the latest edition of NEMA Standard 9.15 and UL969.
- C. In addition to warning labels, provide a label indicating the transformer kVA rating on the front of the transformer, in minimum 2-1/2" black letters.

2.16 ACCESSORIES

Provide the following accessories:

- A. Three-Phase Transformers:
 - 1. Bolted main tank cover.
 - 2. 1.0" upper fill plug.
 - 3. 1.0" drain valve with sampling device in LV compartment.
 - 4. Tank anchoring.
 - 5. Automatic pressure relief valve.
 - 6. Metal drip shield.
 - 7. Ground provisions per C57.12.34 section 9.11.
 - 8. Meet NEMA TR-1 sound levels.
 - 9. Liquid level gauge.
 - 10. Dial-type thermometer gauge.
 - 11. Pressure vacuum gauge.
 - 12. 24" deep cabinet.

- B. Single-Phase Transformers:
 - 1. Oil site gauge (glass window with ball float).
 - 2. 0.5" drain plug in LV compartment.
 - 3. Upper oil fill plug.
 - 4. Tank anchoring
 - 5. Lifting bolts.
 - 6. Ground pads.

PART 3 – EXECUTION

3.1 TESTING AND LOSSES

- A. All units shall be tested for the following:
 - 1. No Load (Core) Losses at 20°C.
 - 2. Load Losses at 85°C and rated current.
 - 3. Total Losses at 85°C.
 - 4. Percent Impedance at 85°C and rated current.
 - 5. Excitation current (100% voltage) test.
 - 6. Efficiency.
 - 7. Ratio tests using all tap settings.
 - 8. Polarity and phase relation tests.
 - 9. Induced potential tests.
 - 10. Full wave and reduced wave impulse test.
- B. The manufacturer shall provide certification for all design and other tests listed in Table 17 of ANSI C57.12.00 including verification that the design has passed Short Circuit Criteria per ANSI C57.12.00 and C57.12.90.
- C. The manufacturer shall provide a statement identifying the amount of PCB in the insulating oil.
- D. One PDF copy of the factory Certified Test Report of each test, in ANSI C57.12.37 format, shall be delivered to the Engineer for review and acceptance prior to shipment of the transformers.

3.2 SHIPPING

- A. The transformers shall be shipped complete and fully assembled.
- B. The transformers shall be packaged to protect from damage during shipment, handling and storage. Each transformer shall be fastened to a pallet to allow loading and unloading with a forklift.
- C. The exterior of each shipping unit shall clearly identify the contents.

END OF SECTION