# **REQUEST FOR PROPOSAL**



### **BURLINGTON ELECTRIC DEPARTMEN1**

585 Pine street Burlington, VT 05401-4891 Phone: 802-865-7456

RFP #				
<b>090-24</b>				
DATE: 4/17/2024				
REQUEST FOR QUOTATION				
THIS IS AN INQUIRY, NOT AN ORDER				
PLEASE QUOTE PROMPTLY				

ALL RFP'S RESPONSES ARE TO BE UPLOADED TO OUR SECURE

WEB SITE USING YOUR UNIQUE LOGI

	DELIVERY REQUIR	RED BY:		TATION DUE BY	REQUISITION N	0:	DEPT:			
	ASAP		<u>NLT 05</u>	5/22/24 11:00am ES			ENGINEERING		_!	
QTY DESCRIPTION										
5	Transformer Size (k	VA)· Prima	arv Voltage	Secondary Voltage	-	scription	n	Spec Impedance	BED Specification	
-			<u> </u>			le Phase, Overhead, Distribution sformer - DUAL BUSHING		Spee Impedance		
	37.5	13800	Grd Y/7970	240/120V	•			1.60% - 2.25%	S0108	
	Purchase Price Load Loss Factor No Load Loss				L	.oss Eva	luation formula "First C	ost Multiplier"		
	Constant	(\$/Wa	att) F	actor (\$/Watt)		NAMEPLATE SHALL INDICAT norphous & Steel Core If not quo		NON-PCB		
	1.301	\$0.9	7	\$17.45	Quote both Amorp			ing one type plea	se specify why!	
(wł	en order is pla	ced appro	oval draw	vings will be rea	uired but should no	ot effe	ct the delivery tim	e)(XFRPOL0	0350) This	
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LOS	S EVALUATION FO	ORMULA AP	PLIES TO	QUOTE & PURCHAS	SE PRICE:					
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IMP	EDANCE:	Bid w	ill be evalua	ated on average val	ues.					
Plea	<u>ise confirm freight</u>	is included	<u>in unit cost</u>	<u>t. It is Y/N (circle on</u>	<u>e quoted)</u>					
			L DE amaila			ina@hu	utington clostric com D			
	LL BE HELD UNTIL				SHIPMENT TO engineeri	ing@bu	iningtonelectric.com . P	ATMENTOFTH	E ABOVE ITEM	
011/										
DEL	IVERY REQUIREM	<u>ENT:</u> SHIP	FOB DEST	INATION FREIGHT	ALLOWED . Hours are 7:	:30 <u>am</u>	<u>to 2:30pm M-F</u>			
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BID	DER, ALL BIDS AR	E OPEN FO	R PUBLIC \	/IEWING						
	PROPOSALS MUS			THE SECURE WEB	SITE. BED WILL NO LO	NGER	ACCEPT FAXED BIDS			
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							PURCHASING	G JEFF TURN	RII	
3. T	ERMS	DISCO	OUNT OF	% IF PAID	NET DAYS	$\square$				
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	.E:					1	PAUL CHARBO email: pcharbonneau	NNEAU 865-74		
				PT OR DECLINE AN	Y AND ALL BIDS.		eman: penarbonneau	wourningtoneled	Surc.com	
AL	L BIDS BECOME T	HE PROPER	RTY OF BU	RLINGTON ELECTR	RIC DEPARTMENT					

## **REQUEST FOR PROPOSAL**

The following is a minimum check list that must be included in the submittal of the above RFP. If any of the information is missing it will make your RFP invalid and we will not be able to consider it for evaluation!!! DID YOU INCLUDE THE FOLLOWING AT A MINIMUM ? **Unit Cost Delivery time** No Load (avg) & (max) Load (avg) & (max)(avg) & (max) Total Impedance (must be average values) Is delivery included in the cost of the item? If not what is the cost for delivery Drawings with dimension. Did you quote both Amorphous core and Steel? If not why? Include manufacturer information about corrosion protection (item 14e on material spec) and coating (item 5j on material spec). All RFP's must be uploaded to our secure site using your unique login. We will only accept Word, Excel or PDF submissions. Once you have Uploaded your file you will get an email indicating that it was successful. All times are based on EST.

Paul Charbonneau

PURCHASING -- JEFF TURNER II

TO INQUIRE ON ABOVE QUOTE PLEASE CALL PURCHASING DEPARTMENT DIRECT AT:

PAUL CHARBONNEAU 865-7456 email: pcharbonneau@burlingtonelectric.com

#### BURLINGTON ELECTRIC DEPARTMENT (BED) MATERIAL SPECIFICATION

#### Single Phase, Overhead, Distribution Transformers

#### 1) Scope

- a) This specification covers the electrical characteristics and mechanical features of single phase, 60 Hz, mineral oil immersed, self-cooled, 65°C rise, overhead type, distribution transformers.
- b) All transformers shall be in accordance with the latest revision of each referenced industry standards (listed below), except as modified by this specification.

ANSI/IEEE C57.12.00	ANSI/IEEE C57.12.20	ANSI/IEEE C57.12.31
ANSI/IEEE C57.12.90	ANSI/IEEE C57.91	

#### 2) Ratings

- a) The kVA rating shall be as specified on the purchase order.
- b) The nominal high voltage rating and the basic impulse insulation level (BIL) shall be the following:

 Two bushing:
 95 kV BIL

c) The nominal low voltage rating and the basic impulse insulation level shall be one of the following:

120/240	30 kV BIL
277	30 kV BIL
240/480	30 kV BIL

#### 3) Impedance Voltage:

#### 4) Testing

- a) All transformer testing shall comply with ANSI/IEEE C57.12.90 and ANSI/IEEE C57.12.00.
- b) All transformers shall be tested for no load losses (85°C), total losses (85°C), percent impedance (85°C) and exciting current (100% rated voltage). No load losses shall also be tested at 105% rated voltage. Guaranteed average and guaranteed maximum losses shall be included with the quotation.
- c) All transformers shall be subjected to a full wave voltage impulse.
- d) The manufacturer shall supply verification that the design has passed Short Circuit criteria per ANSI/IEEE C57.12.00 and ANSI/IEEE C57.12.90.
- e) Complete certified test reports, by serial number, shall be delivered to BED with the transformers. These reports must either be signed by an authorized individual at the factory or be accompanied by a cover letter referring to purchase order number and signed by an agent authorized to conduct

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transformer sales business for the manufacturer.

5) Construction

- a) The transformer shall be constructed in accordance with ANSI/IEEE C57.12.20.
- b) The nameplate shall be made of a corrosion resistant material and permanently marked meeting ANSI/IEEE C57.12.00, for nameplate A.
- c) The manufacturer shall certify that the transformer and the oil are PCB free. This will be indicated on the transformer nameplate.
- d) Connectors and terminals shall accommodate either aluminum or copper conductors.
- e) If specified by BED, 2-2.5% AN and 2-2.5% BN full capacity taps shall be provided. Taps shall be connected to the primary winding.
- f) The transformer finish shall be resistant to transformer oils and shall withstand a minimum 160 inchpound impact per ASTM D2794. This finish shall meet or exceed the following as set forth in ANSI/IEEE C57.12.31.
- g) The transformer tank shall have a removable cover that is sloped for moisture run-off. A means of manually venting the tank prior to cover removal shall be provided.
- h) An automatic pressure relief device designed to re-seal after operating shall be provided.
- i) The transformer tank withstand shall meet NEMA TR 1-1980, Part 2, Page 6, Section D.
- j) The transformer shall be capable of being loaded in accordance with ANSI/IEEE C57.91. Ancillary equipment shall not limit the loading of the transformer to this guide.
- k) All insulating paper used as layer insulation in transformer coils shall be bonded type, coated on both sides with a thermosetting adhesive and properly cured prior to impregnating with oil or the coils shall be wound with primary conductor containing a thermosetting adhesive that when properly cured will form an effective bond, both turn to turn and layer to layer.
- 1) The internal secondary leads shall be permanently identified corresponding to the lead markings on the nameplate.
- m) The transformer tank shall be equipped with arrester mounting pads.
- n) Unless otherwise specified by BED, no primary fusing or secondary breaker shall be provided.
- 6) Information to be provided with quotation:
  - a) Outline drawing of a typical unit, including a one-line diagram of the transformer.
  - b) Average percent positive impedance, X/R and percent exciting current.
  - c) Average and guaranteed maximum Total Load Losses.
  - d) Average and guaranteed maximum No Load Losses.

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- e) A description of the method used to minimize tank corrosion (design details or type of treatment).
- f) Warranty information and location of the nearest service shop, owned and operated by the manufacturer, which is capable of repairing all components of the transformer shall be provided.
- 7) Information to be provided with Shipment of Transformer:
  - a) Manufacturer shall provide BED with the final X/R and percent positive impedance.
- 8) Exceptions:

Any exceptions to this specification shall be clearly documented when quoting. Exceptions must be specifically granted in writing by BED. Failure of BED to acknowledge exceptions when placing an order requires the manufacturer to comply with this specification if the order is accepted. Manufacturer shall not provide exception to the transformer impedance specified in part 3 of this specification.

9) Approval of final drawings:

Manufacturer shall provide BED with final transformer drawings after P.O. is placed. Approval of final drawings by BED shall be required.

10) BED's loss evaluation formula applies to all bids.

#### 11) Penalties:

Failure to meet quoted losses may result in a financial penalty being assessed the manufacturer. The penalty will be determined via BED's loss evaluation formula.

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