

FAYETTEVILLE PUBLIC WORKS COMMISSION

PWC2122031 - 230 / 66KV AUTO TRANSFORMERS 134.4 / 179.21 224 MVA AT 65C BID OPENING: FEBRUARY 17, 2022 AT 2:00PM

	Virginia Transformer Corp 220 Glade View Dr., Roanoke, VA 24012	WESCO Distribution Inc. 334 Atkinson St. NC 27520	Clayton,	Siemens Energy, Inc 8841 Wadford Dr., NC, 27616	Raleigh
Bid Bond	X	X		X	
Manufacturer	Virginia - Georgia transformer	GE PROLEC		Siemens Energy, Inc	
Type Or Model:	230/66kV Autotransformer	Three Phase, Oil Immersed, Autotransformer 120/160/200 MVA		N/A	
Location or Manufacturing Facility:	Rincon, GA	Apodaca, Nuevo Leon, Mexico		Guanajuato, Mexico	
Nearest Repair Facility:	Rincon, GA	N/A		N/A	
Percent of Failure of last 100 power transformers at the factory testing:	N/A	N/A		2.6% (factory testing) y 0.9% (in field)	
Percent of Failure of last 100 power transformers after installed in field:	N/A	N/A		2.6% (factory testing) y 0.9% (in field)	
Other Utilities Purchasing Recent Units of Same Design:	N/A	N/A		Pacific Gas & Electric, Avista, First Energy	
North Carolina Sales Tax	\$ 172,790.66	\$ 159,621.00		N/A	
Total Unit Cost	\$ 2,641,228.66	\$ 2,280,300.00		\$ 2,686,700.00	

MAXIMUM GUARANTEED LOSSES						
SCHEDULES 1 (1)						
	kW	kW	kW	kW	kW	kW
Maximum Guaranteed no-load kW losses, 100% Voltage, 75C, 120 MVA (3)	52.0	52.0	Included in proposal	Included in proposal	49	N/A
Maximum Guaranteed load kW losses, (not total losses) at 120 MVA (3)	208.0	208.0	Included in proposal	Included in proposal	188	N/A
Maximum guaranteed Total kW losses, at 120 MVA, 75C(3)	260.0	260.0	Included in proposal	Included in proposal	237	N/A
Auxiliary kW losses, first stage cooling	10.0	10.0	Included in proposal	Included in proposal	6.5	N/A
Auxiliary kW losses, second stage cooling	10.0	10.0	Included in proposal	Included in proposal	13	N/A
Impedance%	10.08%		Included in proposal		10.08% @ 134.4MVA	

DELIVERY (DAYS*)			
Approval Drawings	56-70 Days ARO	24-26 Weeks	14 Weeks ARO
Final Drawings	46-48 weeks ARO	N/A	16 Weeks
Delivery	48-50 weeks ARO	70-74 Weeks	10-12 Months ARO

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	WEG Transformers USA WEG Dr. 63090	6350 Washington, MO	HICO AMERICA Penn Center West Pittsburg PA 15276	Three Suite 300	Delta Star, Inc. - Delta Star Transformers Inc. 3550 Mayflower Drive Lynchburg, VA 24501
Bid Bond	X		X		X
Manufacturer	WEG Transformers USA		HICO AMERICA		Delta Star, Inc.
Type Or Model:	N/A		Transformer		Auto Transformer
Location or Manufacturing Facility:	Huehuetoca, Mexico		Memphis, TN		Lynchburg, VA
Nearest Repair Facility:	Huehuetoca, Mexico		Memphis, TN		Lynchburg, VA
Percent of Failure of last 100 power transformers:	3.5%		0%		4.00%
Percent of Failure of last 100 power transformers after installed in field:	0%		0%		0.0%
Other Utilities Purchasing Recent Units of Same Design:	Included in proposal		America Electric Power		Included in proposal
North Carolina Sales Tax	\$	189,572.00	\$	194,817.00	N/A
Total Unit Cost	\$	2,897,747.00 (includes freight, offload,& field service)	\$	2,977,922.00	\$ 4,267,806.00

MAXIMUM GUARANTEED LOSSES						
SCHEDULES 1 (1)						
	kW	kW	kW	kW	kW	kW *at 134.4 MVA 85C
Maximum Guaranteed no-load kW losses, 100% Voltage, 75C, 120MVA (3)	44.0	N/A	68.5	N/A	48.8	48.8
Maximum Guaranteed load kW losses, (not total losses) at 120MVA (3)	182.0	N/A	134.4	N/A	171	218.7
Maximum guaranteed Total kW losses, at 120MVA, 75C(3)	26.0	N/A	202.9	N/A	219.8	367.5
Auxiliary kW losses, first stage cooling	5.0	N/A	4	N/A	5.25	5.25
Auxiliary kW losses, second stage cooling	10.00	N/A	8	N/A	10.5	10.5
Impedance%	9% @ at base 120MVA		10%		10.08% - At 134.4 MVA (section 6.5)	

DELIVERY (DAYS*)			
Approval Drawings	90-105		20 weeks
Final Drawings	26 weeks ARO		TBD
Delivery	June 2024 (Min lead time 56 weeks ARO)		by June 30, 2024

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	Hyundai Power Transformer Inc. 6100 Atlantic Blvd 2nd Fir Norcross, GA 30071	JSHP Transformer 4030 Moorpark Avenue #222 San Jose, CA 95117
Bid Bond	X	X
Manufacturer	Hyundai Power Transformer Inc.	Jiangsu Huapeng Transformer Co., Ltd. DBA JSHP Transformer
Type Or Model:	230/66/13.8kV, 224/200/160/120 MVA Auto Transformer	Private Company
Location or Manufacturing Facility:	215 Folmar Pkwy, Montgomery, AL 36105	68# Kunlun Develop Zone Liyang City, Jiangsu Province, P. R. China
Nearest Repair Facility:	215 Folmar Pkwy, Montgomery, AL 36105	180 Constellation Drive, Stoney Creek, Ontario L8E 6B2
Percent of Failure of last 100 power transformers at the factory testing:	4.0%	0.5%
Percent of Failure of last 100 power transformers after installed in field:	0%	0.00%
Other Utilities Purchasing Recent Units of Same Design:	FPL/Miami spare: 138/69/13.2kV, 224/179/134MVA Auto Tampa Electric/224MVA auto : 233.7/69/15kV.224/179.2/134.4MV Auto SCE/Santa Clara project : 220/66kV, 250/200/150MV Auto FPL/CNI : 138/69/13.2kV, 224/179/134MV Auto	BHE / MidAmerican Hills & Q39 / Carlisle Storage Facility Project 560MVA 345kV YNa0d1 Contact name: Joe Dugan (712) 366-5649 BHE / PacifiCorp Oquirrh Project 700 MVA 345kV YN a0d1 Contact name: Brett Allsup (503)813-6413 BHE / NV Energy Harry Allen Project FOUR 500MVA 525kV Ia0i0 Contact name: Geoff Matthews (515) 979-3758
North Carolina Sales Tax	\$ 203,700.00	\$ 209,700.00
Total Base Bid	\$ 3,113,700.00	\$ 3,205,410.00

MAXIMUM GUARANTEED LOSSES				
SCHEDULES 1 (1)				
	kW	kW	kW	kW
Maximum Guaranteed no-load kW losses, 100% Voltage, 75C 120MVA (3)	56	N/A (at rated tap position)	56	56
Maximum Guaranteed no-load kW losses, (not total losses) 100% Voltage, 75C 120MVA (3)	143	N/A (at rated tap position)	174	174
Maximum guaranteed Total kW losses, at 120MVA, 75C(3)	199	N/A (at rated tap position)	230	230
Auxilliary kW losses, first stage cooling	3	N/A (for cooling fans ONAF 1)	7	7
Auxilliary kW losses, second stage cooling	6	N/A (for cooling fans ONAF 2)	14	14
Impedance%	9% (at 120MVA, 75C, rated tap position)		10%	
DELIVERY (DAYS*)				
Approval Drawings	12 weeks after PO awarded		45 Days ARO	
Final Drawings	2 weeks after drawing approval date		16 weeks ARO	
Delivery	June of 2024		60 weeks ARO	