



8192 Alamo Transformers

Jerry Fielder

Engineering Division Manager, DME

June 6, 2023

ID23-1009



Concerns & Actions

Safety

- Experiencing a failure rate of 20% for new transformers
- Safety for field crews during installation
- **FY23-24 Capital Budget Item for industry standard testing equipment**

Customer Service

- DME works to maintain stock minimums for current customers and emergencies
- DME has fallen under minimums for several transformer sizes
- Shipments continue to be sporadic
- **Looks for multiple avenues to maintain inventory levels including emergency purchases, refurbis, multiple vendors, cooperative contract opportunities**

Supply

- Contracted lead time is 60 weeks, actual lead time is 80 weeks
- **Current industry planning horizon will be set for 3-4 years**



Concerns & Actions

Regulatory

- DOE NOPR – Energy Conservation Standards for Distribution Transformers (effective 2027)
 - Required to move from Core Steel to Amorphous Core
 - Higher cost
 - Larger/Heavier
 - Benefits from efficiency gained has been questioned (transformers are already built to an efficiency of 99.5% or higher¹)
 - More expensive
 - Requires re-tooling at manufacturers facilities
- It is believed NOPR will exacerbate an already stressed supply chain issue



¹ Letter to Secretary Jennifer Granholm, US Dept. of Energy from APPA, et. al, February 15, 2023

Market Volatility

kVA	Phase (pad)	FY21-22	FY22-23 YTD ¹	3-4 Year Planning Horizon ²	2018 Contract Pricing (new)	Lead Time (weeks)	2023 Contract Pricing (new)	Lead Time (weeks)	Δ	Reconditioned (1 Φ only)	Lead Time (weeks)
										Refurbished ³	
25	1 Φ	97	20	390	\$2,195	14	\$8,103	60+	269.16%	\$1,286	ALAMO repair time that fits repair specifications is approximately 12-16 weeks
										\$5,115	
50	1 Φ	148	95	1030	\$2,646		\$9,995		277.73%	\$1,387	
										\$6,050	
75	1 Φ	112	25	810	\$3,121		\$13,047	40+	318.05%	\$1,387	
										\$8,155	
100	1 Φ	40	12	200	\$3,853		\$15,158		293.40%	\$1,792	
										\$10,790	
750	3 Φ	2	3	45	\$23,146		\$65,346		182.32%	N/A	
										\$35,205	
2500	3 Φ	1	1	10	\$58,970		\$163,440		177.15%	N/A	
										\$115,495	



ID23-1009

4

¹DME ceased all standard maintenance transformer operations in order to maintain minimums.

²Includes projections for Hunter & Cole Ranch.

³Estimated based on historic charges and quotes received

Estimated Spend

Project Description	Estimated 3-Year Expenditure
Year 1	\$ 3,000,000
Year 2	\$ 3,000,000
Year 3	\$ 3,000,000
Contingency	\$ 1,000,000
Total	\$10,000,000



Alamo Contract

- One component of an overall strategy to allow DME multiple avenues to meet long term transformer requirements (3-4 years) with the current and projected supply chain issues.
 - Rebuild or refurbish current transformers and return to service.
 - Purchase rebuilt/refurbished.
 - Shorter lead times and DME can apply credit from salvaged transformers.
 - Provides relief in supply chain challenges and service reliability support.
 - Supports sustainable practices with pick-up and disposal of used oil and scrap irreparable transformers.
- When approved funding is depleted, DME will bring a new contract for approval if additional spend authority is required.
- Staff recommends approval of contract with Alamo transformers.



Questions?

Jerry Fielder

Engineering Division Manager

Denton Municipal Electric

