



Engine and Generator Overhauls at Plant No. 1 and 2 Contract No. J-135B

Presented by:
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Acting Director
of Engineering

Operations
Committee

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Background - Central Generation

Central Generation Facilities installed in the early 1990s at Plant No. 1 and 2



Capacity

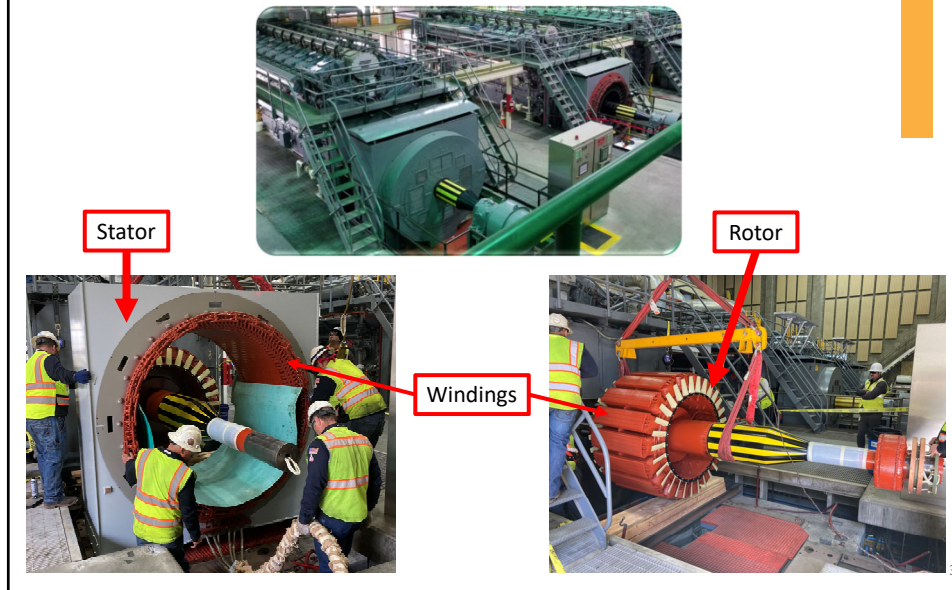
Plant No. 1: (3) 2.5MW
Plant No. 2: (5) 3MW
(1MW Steam Turbine)

Total Generation

10-11MW (total both plants)
Plant No. 1: 60% of plant load
Plant No. 2: 95% of plant load

2

Major Components of a Generator



3

Original Scope of Work

Engine Scope (4 engines):

- Overhaul

Generator Scope (5 generators):

- Test stator and rotor windings
- Steam clean
- Replace power cable leads
- Replace auxiliary components



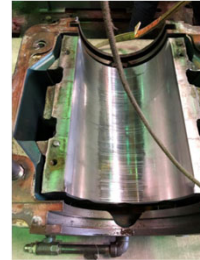
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Initial Findings



Cracked generator cable leads



Wear on bearing surface

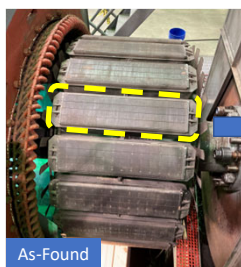
Generator Winding Findings

- Signs of insulation failure (carbon dust)
- Aged insulation based on additional testing
- Damaged insulation
- Windings may not survive steam cleaning

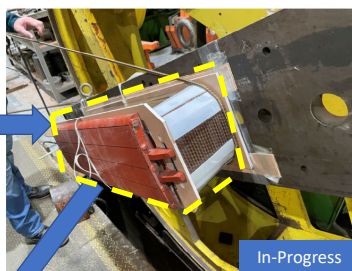
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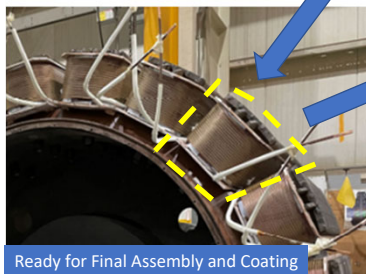
Rotor Rewinding



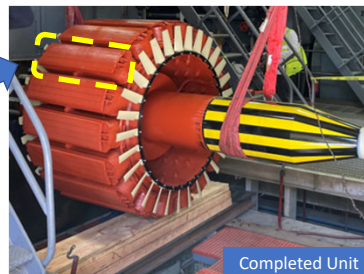
As-Found



In-Progress



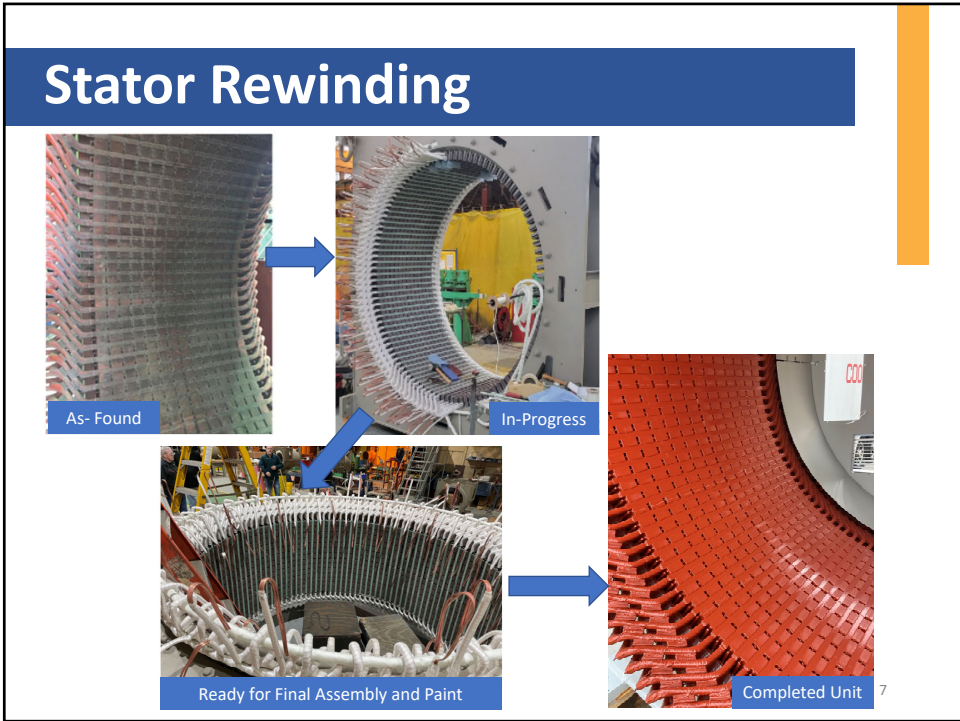
Ready for Final Assembly and Coating



Completed Unit

6

6



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Contingency Fund Request

Original Contract = \$29,361,029

	CONTINGENCY
Original Board Approved Contingency	\$2,936,103 (10%)
Issued Change Order (rewind two generators)	-\$917,783 (-3.1%)
Future Change Order (rewind three generators)	-\$1,637,117 (-5.6%)
Remaining Contingency	\$381,203 (1.3%)
Contingency Increase Request	\$1,637,117 (5.6%)
Remaining Contingency After Request	\$2,018,320 (6.9%)

Total Request Contingency = \$4,573,220 (15.6%)

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Recommendation

Recommend to the Board of Directors to:

Approve the addition of funds to include generator overhauls as part of the construction contract with Cooper Machinery Services LLC, for the Engine and Generator Overhauls at Plant No. 1 and 2, Contract No. J-135B, in the amount of \$1,637,117 (5.6%), for a total construction contingency of \$4,573,220 (15.6%).

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Questions



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