

Electrical Power Distribution System Improvements, Project No. J-98

Presented by:
Mike Dorman, Director of Engineering

Construction Contract Award

Operations Committee
June 4, 2025

OC SAN
ORANGE COUNTY SANITATION DISTRICT

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Plant No. 1 - Normal Power

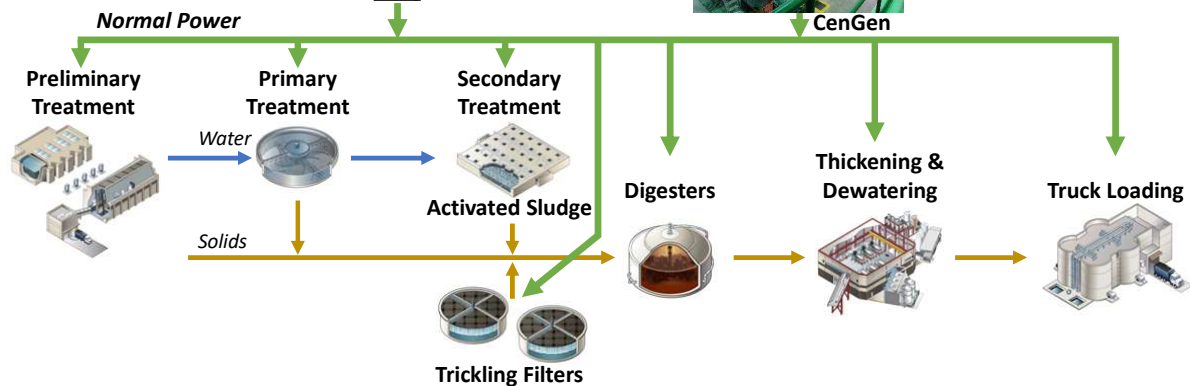
 SOUTHERN CALIFORNIA
EDISON
An EDISON INTERNATIONAL® Company



Utility



CenGen: 5MW
Plant Load: 11MW



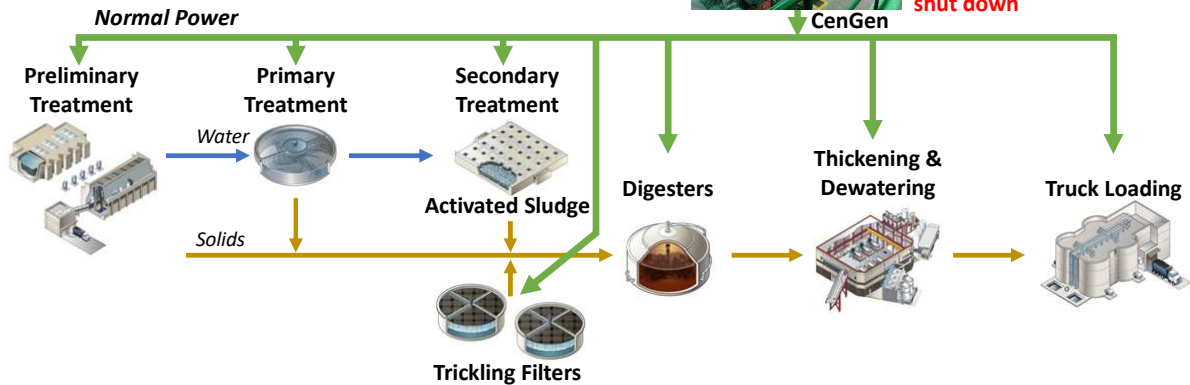
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2

Plant No. 1 - Loss of Utility



CenGen: 5MW
Plant Load: 11MW
CenGen will be
overloaded and
shut down



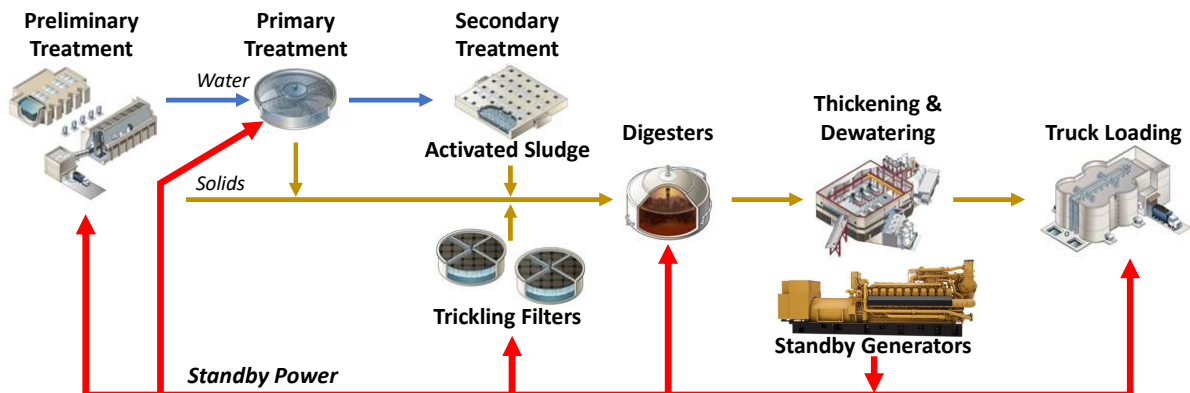
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3

Plant No. 1 - Loss of Utility



CenGen: 5MW
Plant Load: 11MW
CenGen will be
overloaded and
shut down



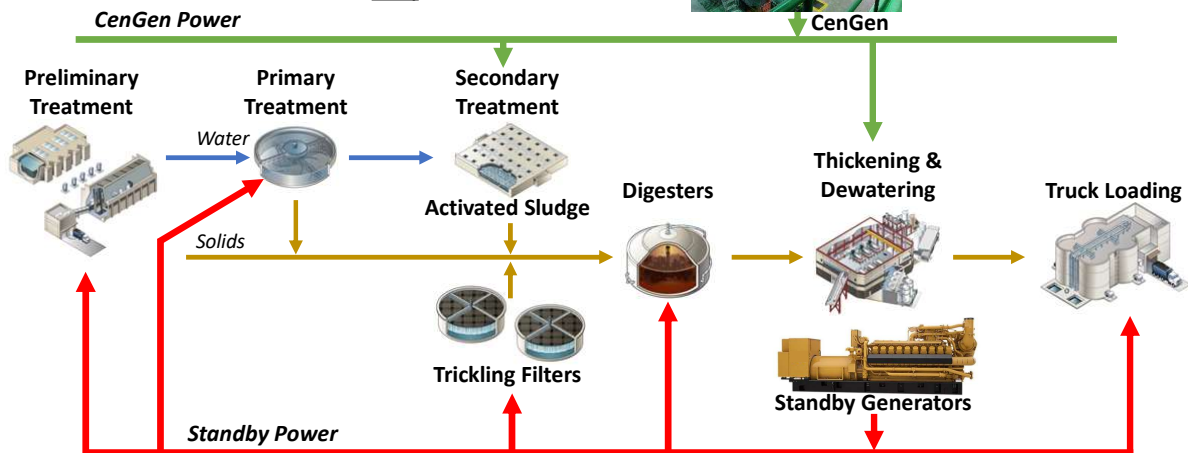
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Plant No. 1 - Loss of Utility



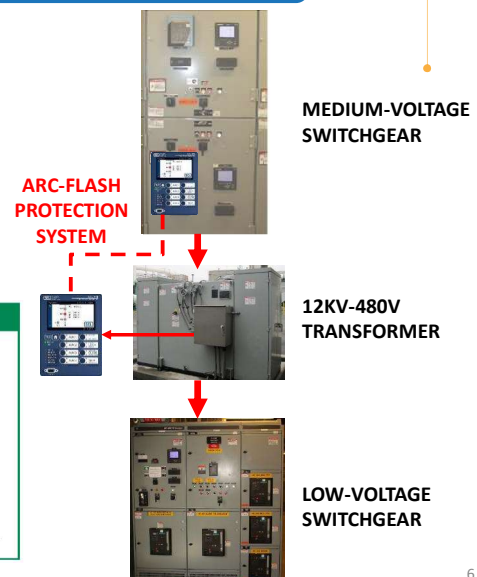
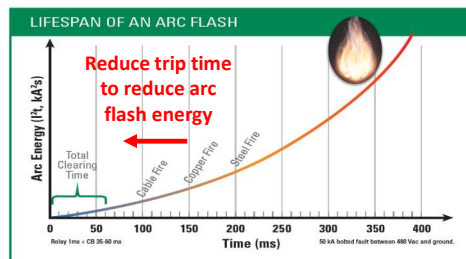
CenGen: 7.5MW
Plant Load: 11MW



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Arc Flash Reduction

- Arc Flash can occur if equipment has a fault
- Arc Flash Reduction:
 - Enhance O&M safety
 - Equipment protection



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Plant No. 1 Improvements

- Plant-wide load shedding system with a substation network
- Plant-wide arc flash reduction
- Speakers and strobes to warn staff of breaker switching
- Surge protection devices in 19 existing switchgear and motor control centers



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Plant No. 2 Improvements

EPSA and Headworks Standby Power Buildings:

- Upgrade existing grounding system
- Add portable load bank connections

EPSA = Effluent Pump Station Annex



Power Building D

- Demo transformer, generator, fuel tank and automatic transfer switch
- Feed from new adjacent Distribution Center F



Distribution Center A

- Monitoring and control
- Replace relays



Power Building B

- Monitoring and control
- Replace relays
- Arc flash mitigation
- Replace aged transformers

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Standby Generator Load Testing



Multiple 2,000kW
Standby Generators



12kV Switchgear



12kV-480V Transformer



Load Bank

Portable Equipment Needed for Generator Load Testing

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Standby Generator Load Testing



Multiple 2,000kW
Standby Generators



12kV Switchgear



12kV-480V Transformer



Portable Cable
Connection Cabinet



Load Bank

*Portable Equipment Needed
for Generator Load Testing*

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Bid Results

Engineer's Estimate

\$ 13,200,000

Bidder	Amount
Shimmick Construction Company, Inc.	\$ 24,352,127
Helix Electric, Inc.	\$ 25,700,000
LEED Electric, Inc.	\$ 27,654,892
Mass Electric Construction Company	\$ 36,203,000

Lowest 3 bids within 13% of each other

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Engineer's Estimate Difference

Total Percent Difference	84%
Description	% Difference
Site and Civil	153%
Electrical and Instrumentation	90%
Switchgear Modifications	84%
Electrical Equipment	44%
General Conditions	77%

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Recommendation

Recommend to the Board of Directors to:

- A. Receive and file Bid Tabulation and Recommendation for Electrical Power Distribution System Improvements, Project No. J-98;
- B. Award a Construction Contract Agreement to Shimmick Construction Company, Inc., for Electrical Power Distribution System Improvements, Project No. J-98, for a total amount not to exceed \$24,352,127; and
- C. Approve a contingency of \$2,435,213 (10%).

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Questions?

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