

Energy and Digester Gas Master Plan

Project No. PS21-04

Presented by:
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Eng. Manager

Operations
Committee
June 1, 2022



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Energy Independence Policy

Future Policy Statement

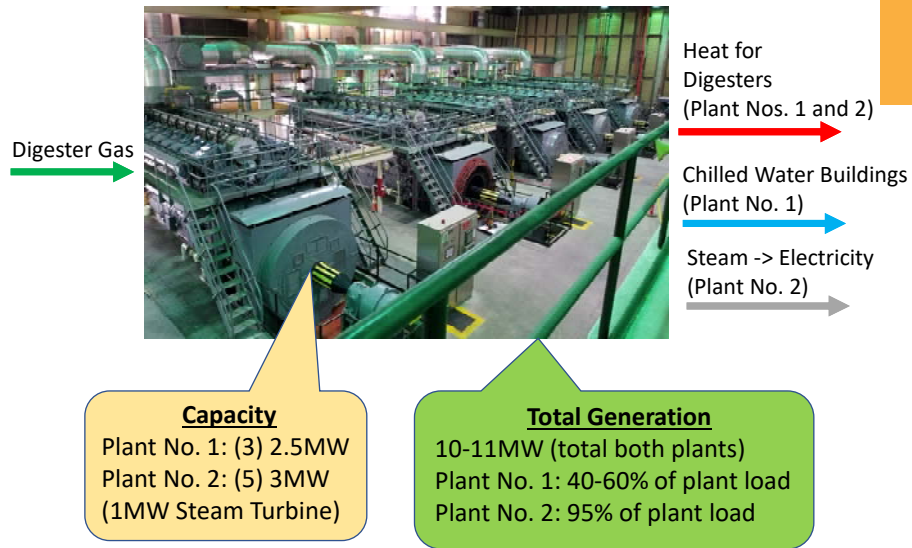
“OC San seeks to be energy independent by self-generating all the electrical and thermal energy necessary to sustain operations.”

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Background - Central Generation

Central Generation Facilities installed in the early 1990s at Plants Nos. 1 and 2



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Background - Engine Overhaul

- All engines need 1st bottom-end overhaul (120,000 hrs)
- Plant No. 1, Engine 1: Two catastrophic engine failures
- PS20-04 Power Generation Overhaul Feasibility Study: Viable to overhaul engines for the next 20 years
- Recently successfully completed P1, Engine 1
- Negotiating overhaul costs:
 - Plant No. 1: 1 engine
 - Plant No. 2: 3 engines



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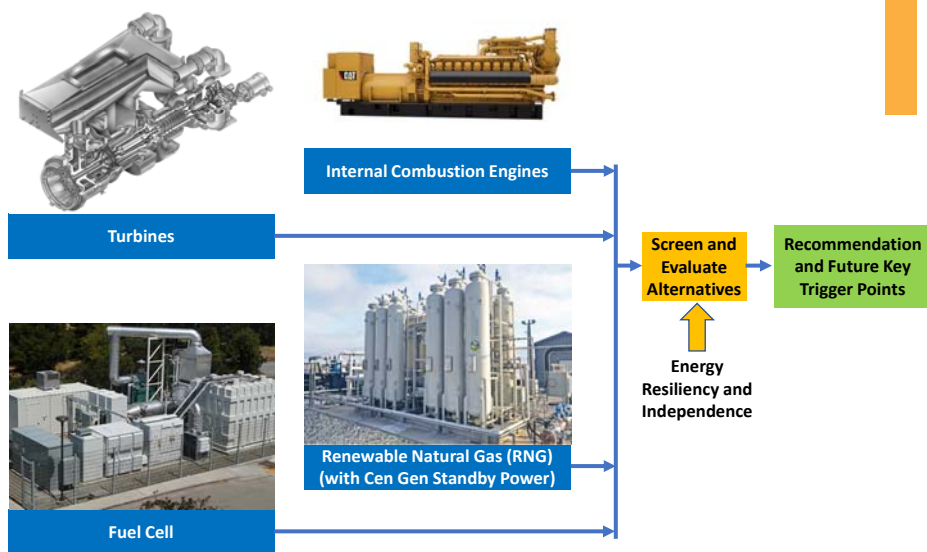
Study Objectives

1. Develop a long-term plan for Cen Gen if overhauls are no longer viable in the future or if South Coast Air Quality Management District's future regulations prevent the operation of the engines
2. Develop a standby power policy to maintain permit compliance
3. Develop an energy resiliency and independence strategy

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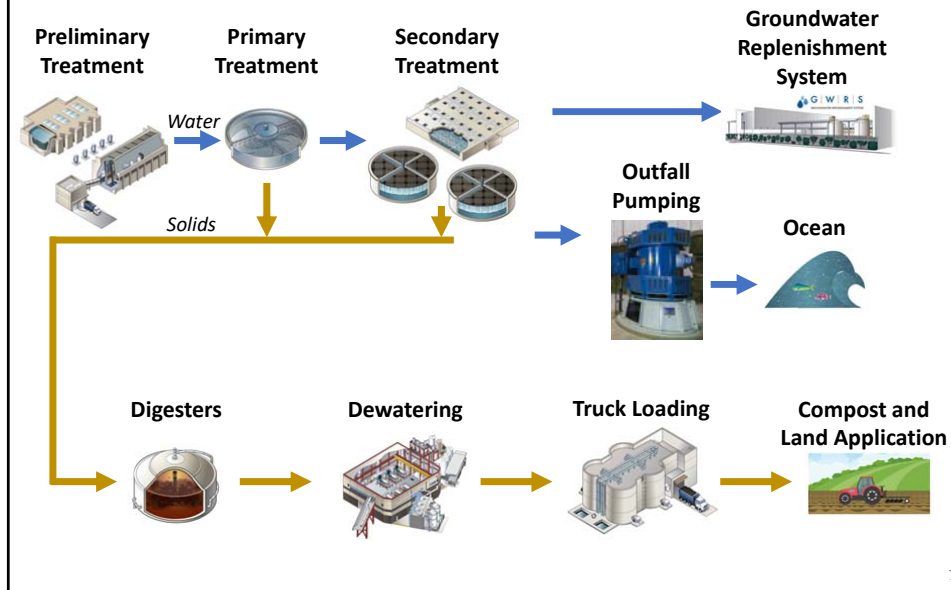
Cen Gen Replacement Options



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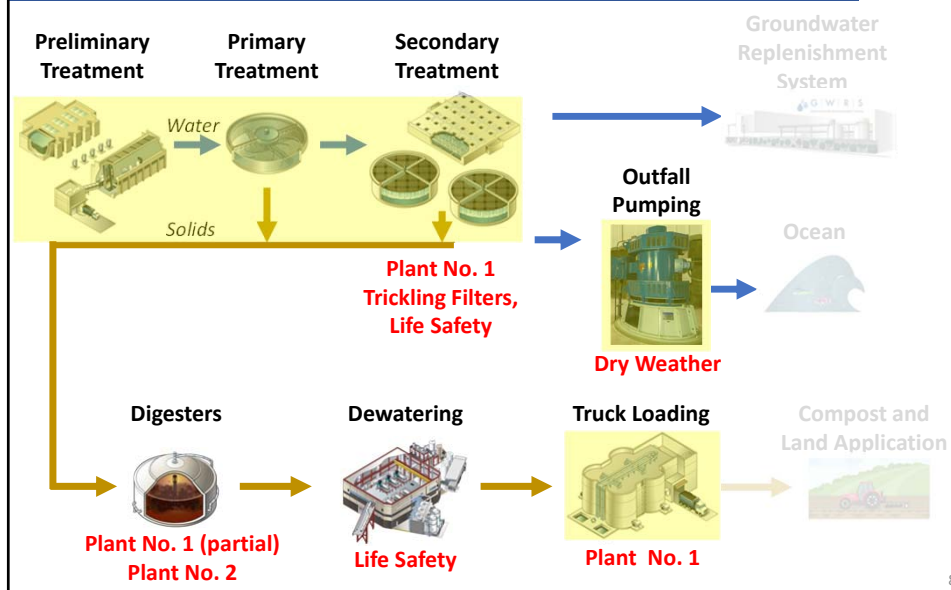
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Plant Process Flow Diagram



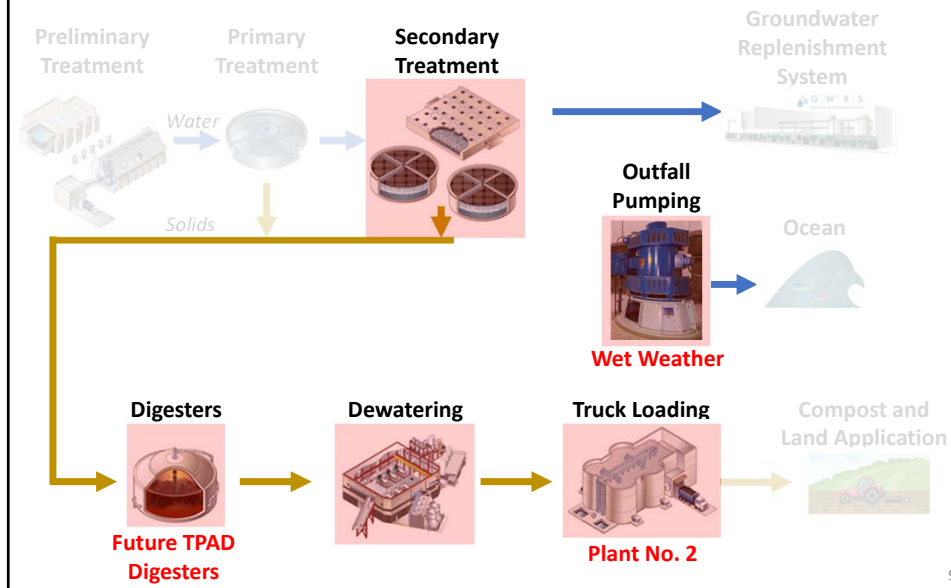
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Loads Fed from Standby Power



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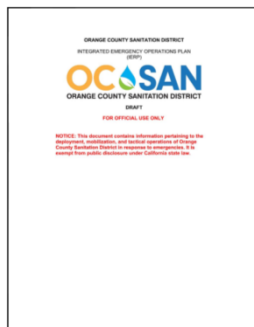
Loads Fed from Cen Gen



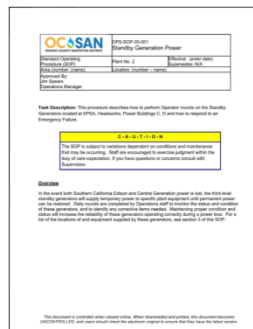
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Update OC San Procedures

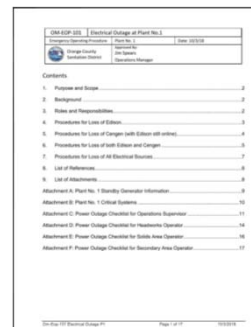
Update IERP, Vol II
05- Utility Outages



Update Standby Power
Standard Operating
Procedure (SOP)



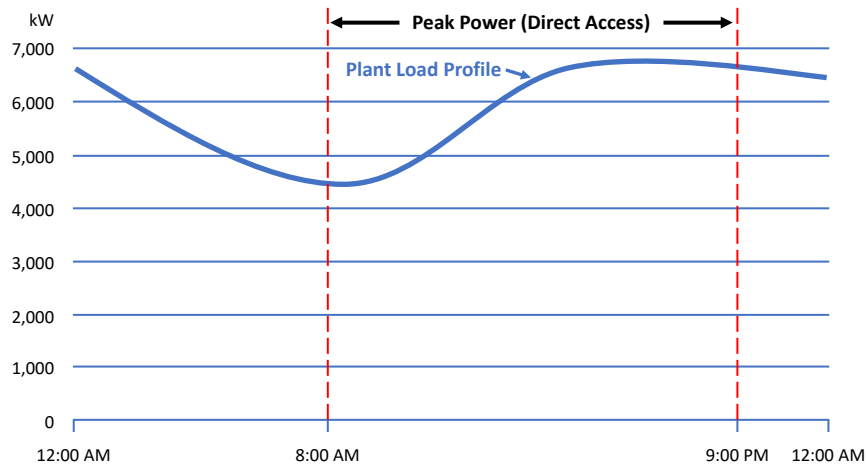
Update Electrical Outage
Emergency Operation
Procedure (EOP)



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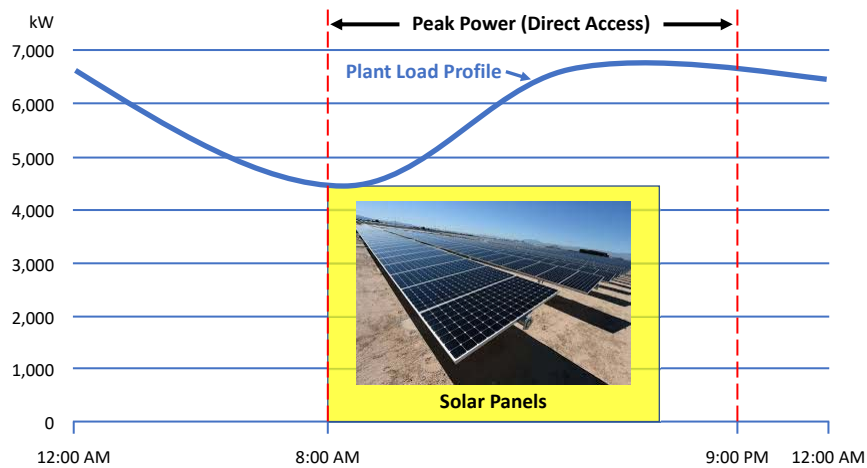
Energy Independence



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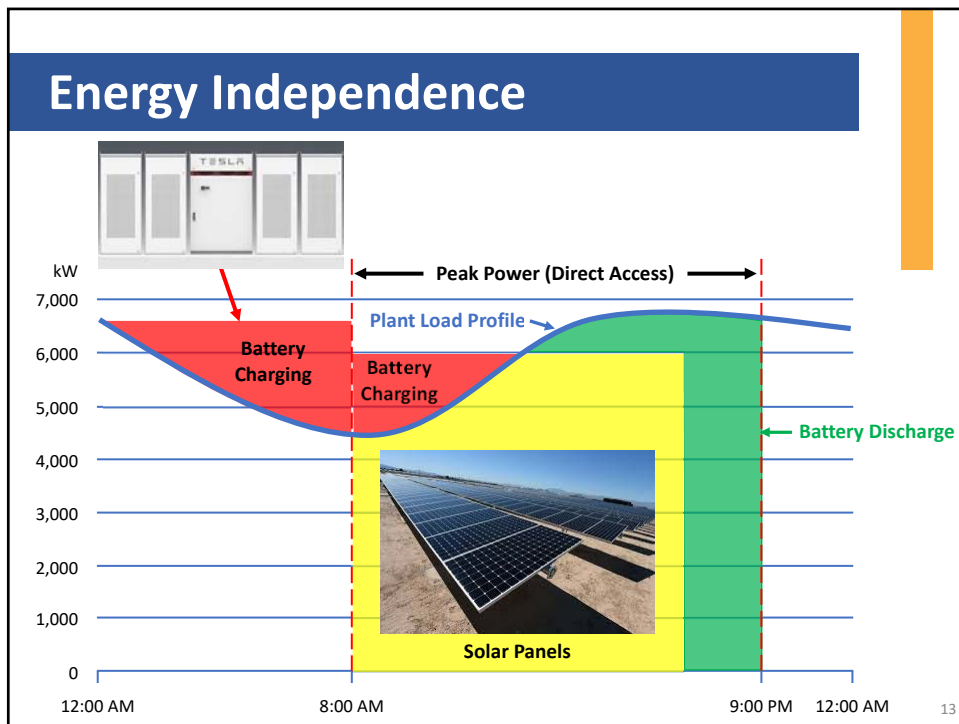
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Energy Independence

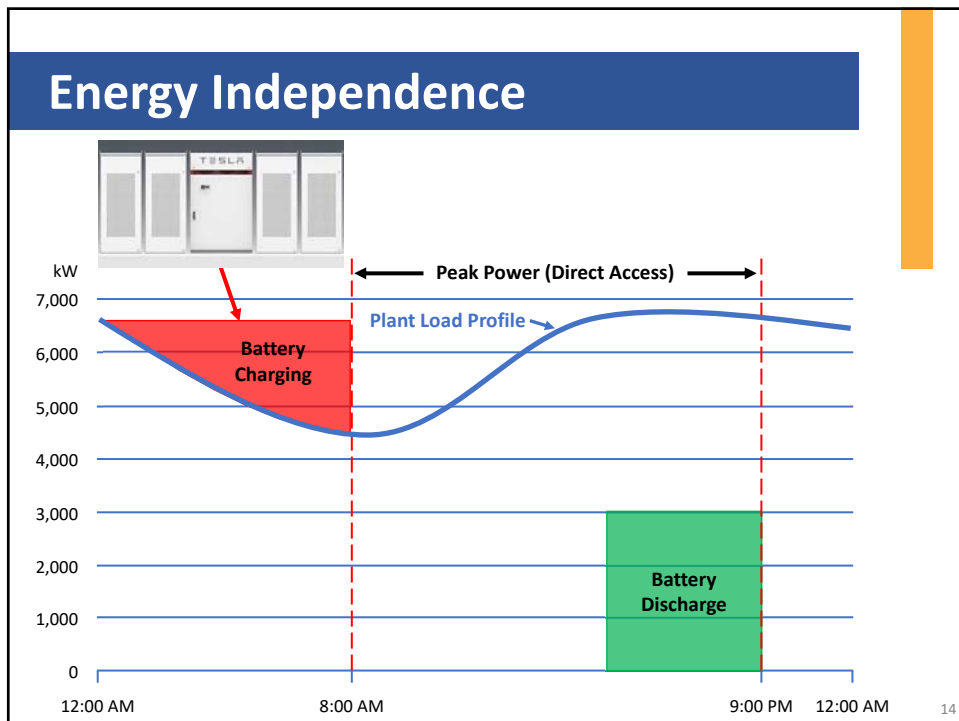


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Selection Process

- Three proposals received
- Interviewed all three firms
- Brown and Caldwell selected
 - Clear project understanding
 - Good project execution approach
 - Good experience on studies and projects utilizing digester gas

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Negotiations

	Original Proposal	Negotiated
Total Hours	6,149	5,794
Total Fee	\$1,544,692	\$1,438,037

- Reduced effort on updating existing procedures
- Reduced effort evaluating details of replacement alternatives

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Recommendation

Recommend to the Board of Directors to:

- A. Approve a Professional Services Agreement with Brown and Caldwell to provide engineering services for the Energy and Digester Gas Master Plan, Project No. PS21-04, for an amount not to exceed \$1,438,037; and
- B. Approve a contingency of \$143,804 (10%).

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Questions



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