COMBINED HEAT & POWER AND EFFICIENCY INITIATIVES

South District Wastewater Treatment Plant

Presented By: Debbie Griner, Resilience Manager  September 27, 2018
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Project Objectives

Operational Efficiencies
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Barrier to Implementation

• Integration
  – Electrical distribution systems – parallel interconnection and configuration of switchgear connections
  – Utility agreements

• High maintenance systems
  – Blending sources with varying methane content and heating values while achieving engine efficiencies and meeting air emissions standards

• Air permitting

• Staff - sufficient number and expertise (electricians, diesel mechanics, instrument technicians)

• Competing priorities
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Lessons Learned

• Engaging operations staff at the project planning phase to maximize effective design and operation

• Consider long-term plant power load to enable expansion of cogeneration to offset new demand

• Establish performance measurement data & tools

• A Champion to support troubleshooting, continued improvement, and reporting and messaging

• Partnership is key for continuous improvement
  – US DOE CHP Accelerator
  – Academic sector
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Project Impact

• 2-3 MW / 30% of energy needs
• $650,000 annual savings
• Reduce emissions from wastewater and landfill operations
• Operational continuity during and after storm events
• Allows for response resources across region