West County Wastewater

Energy Infrastructure Upgrades to Reduce Greenhouse Gas Emissions and Operating Costs

About West County Wastewater

West County Wastewater serves several communities in California's Richmond area. The organization owns, operates, and maintains a wastewater collection system with 249 miles of gravity sewer pipelines, 17 lift stations, 6 miles of pressure force mains, and a Water Quality and Resource Recovery Plant with a capacity of 12.5 million gallons per day. The utility aims to encourage healthy industrial and environmental practices that will benefit the region and its communities.

Reducing Greenhouse Gas Emissions

"To us, community and environmental stewardship is about more than providing wastewater services. It is about working together to encourage and employ healthy industry and environmental practices that will benefit the region, our communities, and our ecosystem for years ahead."

—Andrew Clough, *Deputy General Manager, West County Wastewater*

A COMPREHENSIVE ENERGY INFRASTRUCTURE AND PROCESS IMPROVEMENT PROGRAM

West County Wastewater's Board of Directors set aggressive goals to reduce its carbon footprint and wider greenhouse gas emissions. At the same time, the board wanted to ready the organization for the implementation of state regulations on short lived climate pollutants (SLCP) and reduce ongoing disposal costs.

To meet these challenges, West County Wastewater set out on a comprehensive energy, infrastructure, and process improvement program, led by its partner ENGIE North America. ENGIE will implement the plant improvements and maintain the installed equipment over the next 20 years under an energy savings performance contract.

A Truly Modern Utility

Wastewater Treatment Process Improvement Upgrades

- A new grit separation system
- Rotary drum thickeners
- A high efficiency aeration blower
- Two new digesters
- A 450 kW cogeneration system powered by biogas from the digesters
- A sludge dewatering system and thermal dryer system
- Equalization basins

ENGIE and West County Wastewater are collaborating on what will be a best-practice model for sustainable water treatment. Upgrades and installations to be implemented by ENGIE include:

- 1.1 MW of onsite solar power generation
- Upgrades to LED lighting
- New electric vehicle charging stations
- Wastewater treatment process improvement upgrades to generate electricity and recover Class A biosolids

The project was financed by the California Air Resources Board (CARB), which awarded funds to the Center for Transportation and the Environment (CTE), a non-profit organization responsible for project oversight, development, management, and reporting.

Transformational Outcomes

This comprehensive infrastructure upgrade program from ENGIE promises to completely reshape West County Wastewater's carbon footprint. Key benefits include:

$83 million
forecast in net program life savings

4.2 million kWh
energy use reduction guaranteed per year

93% reduction
in greenhouse gas over the life of the program

AN ENERGY REVOLUTION

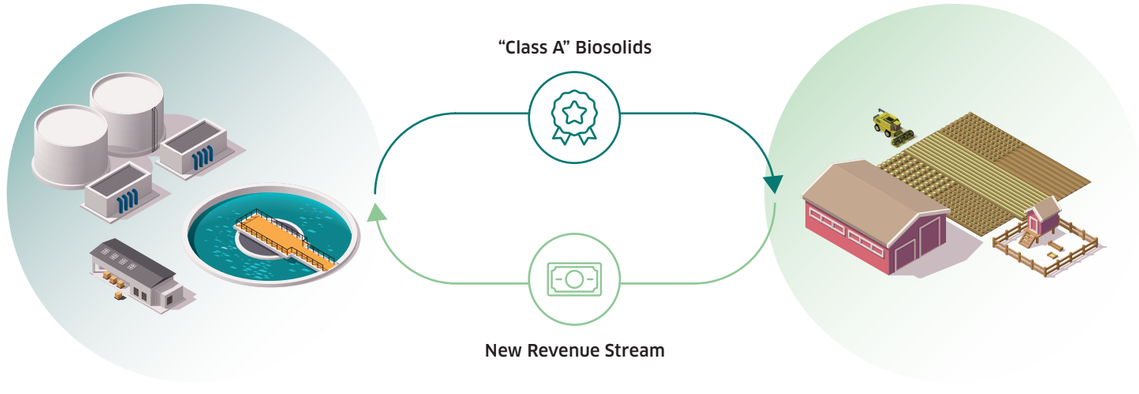
Process-based improvements by ENGIE will reduce solids disposal costs to pay for the infrastructure upgrades and more. New aeration blowers and digesters drive process efficiencies that turn a higher proportion of biosolids into biogas to be burned for electricity generation using a new 450 kW cogeneration system. In addition, the program also encompasses a 1.1 MW solar array and LED lighting retrofit to reduce the facility's energy usage.

A NEW REVENUE STREAM

Historically, biosolids produced by West County Wastewater were sent to landfill because they did not meet the high-quality standards required for beneficial reuse. Process improvement upgrades deployed by ENGIE will allow for the production of "Class A" biosolids, which will be sold for agricultural and other reclamation uses, providing a new source of revenue while reducing the volume of materials the district must pay to send to landfills. The upgrades will also prepare West County Wastewater for the implementation of California's regulations on short-lived climate pollutants, substantially reducing greenhouse gas emissions from the decomposition of sludge in landfills.

"Our alliance with West County Wastewater will serve as a proof point for the benefits of the comprehensive energy collaboration approach."

—Stefaan Sercu, *Managing Director, ENGIE North America*



Three Dimensions of Impact

ENVIRONMENTAL IMPACT

By embracing solar and circular practices around the reuse of biogas and biosolids, West County Wastewater is a trailblazer for sustainability. And by slashing its greenhouse gas emissions by 93%, it's helping to make Richmond a greener, healthier place for its citizens.

SAVING MONEY

The modernization of infrastructure across West County Wastewater's facilities will drive significant cost efficiencies. These will be multiplied exponentially by a near total switch to energy generated onsite through solar and biogas sources.

SUPPORTING PEOPLE

In addition to creating jobs through a District Project Labor Agreement, the program will create internships and career pathways in the wastewater industry for local high school and college students.

About ENGIE North America

As a power generator, energy services company, and retail electricity supplier, ENGIE North America is the only company that delivers comprehensive, integrated services across the entire energy value chain. This makes ENGIE a preferred provider to cities, universities, healthcare providers, and other social infrastructure entities. ENGIE's business strategy focuses on delivering safe, reliable, cost-effective, and sustainable energy solutions that meet customer needs over the long term and contribute to a carbon-neutral economy.

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