

Victor Valley Wastewater Reclamation Authority (VWRA), Victorville, California

Enhancing the Value of Public Infrastructure
by Turning Waste into Renewable Energy

The Victor Valley Wastewater Reclamation Authority (VWRA) is a **wastewater facility that does more than treat wastewater**. Here they convert wastewater and organic waste into renewable energy. It is a replicable model for mid-sized WWTPs across the country.

A Public-Private Partnership (P3) between Anaergia and VWRA, the SoCal Biomethane project was commissioned in 2021.

At the VWRA, the SoCal Biomethane facility combines wastewater solids with food processing scraps collected from across Southern California. The material is processed in anaerobic digesters, where naturally occurring microorganisms break down the waste and produce biogas.

That biogas is upgraded into **renewable natural gas (RNG)** that meets pipeline standards and is delivered into the regional natural gas system along with electricity and heat used for onsite operations.

From waste to renewable energy

The facility processes approximately **280,000 tons of waste and biosolids each year**, producing up to **320,000 MMBtu of biomethane annually**.

Three forms of energy from one facility

The biogas produced at the facility is used in several ways.

Renewable Natural Gas

The biogas is upgraded to pipeline-quality RNG and injected into the existing regional gas pipeline system or can be used for onsite dual-fuel co-generation.

Electricity

The facility generates **1.6 MW of electricity** to support VWRA operations.

Heat

The project produces **3.24 MMBtu/hour of heat** for facility operations.

The result is a facility that generates more than 100% of its own energy needs.

Instead of treating materials simply as waste, VWRA puts them to work producing renewable energy, generating revenue, and achieving net-zero emissions.



Helping reduce emissions

Turning organic waste into renewable energy also helps keep waste out of disposal pathways while capturing the energy contained in that material.

The facility has the potential to reduce greenhouse gas emissions by **up to 72,000 tons per year**.



A model for other communities

The Victor Valley project demonstrates how wastewater treatment facilities can become more than places where communities treat wastewater. They can also become **local renewable energy producers and regional waste-management hubs**.



Project at a Glance

Location: Victorville, California

Solution: Waste-to-Renewable Natural Gas (RNG), Heat, and Electricity

RNG Production: Up to 320,000 MMBtu/year

Electricity: 1.6 MW

Heat: 3.24 MMBtu/hour

Inputs:

- Organic waste 60,000 GPD
- Wastewater sludge: 120,000 GPD

Energy Benefit: More than 100% of facility energy demand generated onsite

Potential Emissions Reduction:
More than 70,000 CO₂e/year

Owner/Operator: SoCal Biomethane

End Use: Pipeline-quality RNG and combined heat and power