



Victor Valley Wastewater Reclamation Authority (VWRA) Victorville, California

Conversion of a Wastewater Treatment Facility Into a Resource Recovery Center Through Co-Digestion and Biomethane Expansion to Deliver Resilience and Revenue



Omnivore™ Retrofit
Triples Existing
Digester Capacity

Cost-Effective
Co-Digestion for
Carbon-Negative RNG

Two Successive
Projects Through
Effective P3 Partnership

The collaboration between VWRA and Anaergia demonstrates how existing wastewater treatment facilities can be converted into resource recovery centers. The project cost-effectively tripled the digestion capacity within existing tankage by upgrading digesters to Anaergia's high-solids Omnivore™ digestion. The increased capacity provides the flexibility to accept additional organic feedstock for co-digestion and generate carbon-negative renewable energy. Phase 1 enabled VWRA to satisfy 100% of its energy demand from onsite bioenergy, while Phase 2 transformed VWRA into a net energy exporter, adding more than 320,000 MMBTU of renewable natural gas (RNG) to the pipeline each year—enough to offset the emissions of more than 2,000 homes for one year. Via this partnership, VWRA is supporting its mission of protecting public health and the environment by providing effective and fiscally responsible resource management, as well as long-term resilience in both energy and water supply for the community.

The phased approach demonstrates the continued success of the VWRA-Anaergia partnership and the bioenergy upgrades delivered.




Overview

- Location: Victorville, CA
- Phase 1 Start Up: 2016
- Phase 1 Scope: Design, Build Finance
- Phase 2 Start Up: 2021
- Phase 2 Scope: Design, Build, Own, Operate, Finance



Key Technologies

- High-Solids Omnivore™ Digestion
- Biogas Conditioning
- CHP Power Generation
- RNG Upgrading and Pipeline Injection



Inputs

- 140,000 gpd sludge (primary and waste activated)
- 85,000 gpd external organic waste



Results

- 3x digester capacity
- >100% of energy demand generated onsite
- 20-year revenue from lease, tip fees, and gas sales
- Carbon negative fuel generation



Outputs

- Electricity to VWRA: 1.6 MW
- Heat to VWRA: 3.24 MMBTU/h
- RNG to Pipeline: 320,000 MMBTU/year

Anaergia's Omnivore™ combined with power generation offers a model for wastewater treatment plants to become energy exporters, delivering both resilience and revenue.

VWRA PROCESS FLOW

