

ELIMINATING THE WASTE IN WASTEWATER



SAN ANTONIO

For municipals looking to be more energy efficient, reduce their carbon footprint, utilize renewable energy and perhaps generate revenue, companies like Ameresco might be the answer.

Working with cities nation-wide, Ameresco tailors environmental solutions for wastewater treatment plants and other customers. The company takes methane, a byproduct of sewage treatment and converts it into a renewable energy source. Some cities have chosen simply to collect royalty payments after Ameresco captures, refines and sells it; other cities have chosen to use the renewable energy to help offset their energy needs in an environmentally friendly manner.

San Antonio

San Antonio Water System (SAWS) is the first wastewater utility to partner with a private-sector company to deliver and sell processed biogas into the natural gas pipeline.

Ameresco captures the gas from the San Antonio wastewater treatment plant, filters the impurities out and puts it in the pipeline to be bought on the open market instead of burning off the gas and wasting energy. The plant is able to turn 900,000 cubic feet of methane into usable (green term) gas for the country.

The project pays SAWS 12 percent in royalties which works out to about \$200,000 per year, saving rate payers as well.

The process also allows SAWS to improve the air quality around San Antonio. It offers the estimated annual carbon reduction equivalent to the removal of 31,261 cars from the road, the planting of 38,736 acres of trees, the reduction of 19,739 tons of CO₂, or the heating of more than 4,689 average-size homes.

Ameresco hired local contractors to build the facility and a local operator to run it, thus creating green jobs in San Antonio.

SAWS is also able to use 80 percent of the solids to generate compost and recycles the water.

“We hated to see the bio product going to waste when it is an energy source,” says SAWS Chief Operating Officer Steve Clouse. “We wanted to find a way to capture that value because we try to recycle everything we can. We eliminate the waste in wastewater.”



Dallas and Philadelphia

Dallas worked with Ameresco to develop a cogeneration facility that provides the city with a source of clean energy, helping them to meet state legislation guidelines for reduced energy consumption and utilization of renewable energy by generating more than 30,000 renewable energy credits (RECs) per year.

“Ameresco has played a significant role on the project by designing, constructing, financing and operating a 4.2 MW combined heat and power facility that will help the city meet its financial and environmental goals,” says Dallas Water Utilities Senior Program Manager Wastewater Facilities Management Richard V. Wagner, P.E. “Ameresco’s project team utilized good quality control, customer service and site safety to deliver a facility that exceeded our expectations.”

According to Ameresco, the Dallas facility provides “significant reductions in particulate matter, Mercury, SOx, volatile organic compounds and water” as well as 40,156 tons of CO₂.

Dallas agreed to lease a 2.5 acre tract of land for the facility, provide construction of all utility extensions, supply a minimum quantity of raw biogas to Ameresco and to purchase all electricity and thermal produced by the facility at a set rate over the term of the lease.

In turn, Ameresco agreed to finance, design, permit, build, own, operate and maintain the facility, provide a base rental payment to the city for the use of the lease, provide the city a guaranteed minimum amount of electricity to the city and provide the city a guaranteed minimum amount of hot water for heating ongoing operations of digesters and boilers.


Like they did in Dallas, Ameresco will design, build and maintain a 5.7 MW cogeneration facility for Philadelphia. The Philadelphia Water Department (PWD) is expected to save \$12 million in energy costs over the course of the 16 year contract as well as provide a source of green energy to PWD.

“The Philadelphia Water Department is a progressive organization that recognizes the value and importance of environmental stewardship while cutting costs and improving infrastructure,” said Ameresco Senior Vice President Michael T. Bakas. “As a part



of this contract, Ameresco developed an economic opportunity plan that will bring green jobs to the local community. Ameresco is looking forward to making this project a reality for the Philadelphia Water Department and the residents of Philadelphia.”

The PWD project estimates a reduction of 22,000 tons of carbon emissions per year.

Ameresco spends a tremendous amount of time with clients and designs the project to meet their goals. “Different projects have different needs,” explains Bakas. “In Philadelphia, our client wanted to use their source of biogas to serve their internal needs while mitigating the volatile energy markets. In other markets, where electric rates are low, it made more sense for some of our clients to process and sell the natural gas to the marketplace to benefit from the premium paid for “green gas.” We present our customers with a variety of options and they make the decisions that are best for them.” 

Headquartered in Massachusetts, Ameresco provides renewable energy solutions for facilities across the country with more than 900 employees in 62 offices in 34 states and Canada. For more information, visit www.ameresco.com.

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