

RENEWABLE ENERGY AND BIOSOLIDS FACILITY

STATE PROGRAM: Delaware Department of Natural Resources and Environmental Control

ASSISTANCE RECIPIENT: City of Wilmington

ASSISTANCE AMOUNT: \$36M



PROJECT DESCRIPTION

The City of Wilmington's wastewater treatment facility received a \$36 million CWSRF loan (largest in the program at the time) to construct a renewable energy and biosolids facility for its treatment plant. The project was designed and implemented under the State of Delaware's Energy Performance Contracting Act whereby energy and operational savings of the facility pay for the cost of the project through a guaranteed energy performance contract. This new facility now captures previously flared off methane gas from the plant's anaerobic digester and gas from a nearby landfill and uses it to power two reciprocating internal combustion engines that generate four megawatts of electricity. This offsets the treatment facility's electricity needs by 90 percent. The thermal energy from the engines is used to heat a sludge thermal dryer, which reduces 140 wet tons of daily biosolids by nearly 80 percent to reach about 30 dry tons of biosolids. These reductions in electricity and solid waste disposal costs are estimated to save the City \$16.7 million over 20 years.

This project also sponsored a \$3.4 million CWSRF loan for the permanent conservation of 22 acres of wetlands in the historic Southbridge region. This sponsored project was funded with the savings made from having the total loan interest rate reduced from three percent to two percent. The two loans have the same annual debt service of the original loan which means conserving the wetlands required no extra funds. This has led to an application from the City for an additional \$15.2 million CWSRF loan to remediate the wetlands for flood control and stormwater management for the nearby Southbridge community.

To read more about this case study, please visit [epa.gov/sites/default/files/2018-11/documents/pisces_2018_compendium_0.pdf](https://www.epa.gov/sites/default/files/2018-11/documents/pisces_2018_compendium_0.pdf).