



Clean Water State Revolving Fund

COMBINED HEAT AND POWER SYSTEM AT DC WATER BLUE PLAINS ADVANCED WASTEWATER TREATMENT PLANT

STATE PROGRAM: Maryland Department of Environment

ASSISTANCE RECIPIENT: Washington Suburban Sanitary Commission (WSSC)

ASSISTANCE AMOUNT: \$8.2M

PROJECT DESCRIPTION

The Washington Suburban Sanitary Commission (WSSC) received an \$8.2 million energy efficiency loan from the Maryland CWSRF as part of a cost-sharing agreement with DC Water to design and build a new Combined Heat and Power System (CHP) at DC Water's Blue Plains Advanced Wastewater Treatment Plant. The new CHP system has an innovative thermal hydrolysis sludge process that uses high pressure and high temperature to breakdown the cellular structure of the sludge, making it more conducive to digestion along with four new sludge digesters, gas scrubbing equipment, and three micro-turbines. This facility is now able to generate enough energy to supply about 1/3 of the plant's energy needs from the resultant digester biogas, saving the utility about \$10 million in annual electric costs. The reliable, cost-effective project was completed in 2015 and is a prime example of how localities can invest in infrastructure while conserving energy and cleaning the environment at the world's largest advanced treatment plant.

To read more about this case study, please visit https://www.epa.gov/sites/default/files/2017-10/documents/funding_energy_efficiency_and_conservation_projects_with_the_clean_water_state_revolving_fund.pdf.