

## Biosolids Energy - Energy Savings Performance Contract

Upgrade of Multiple Hearth Furnaces  
at Western Branch WWTP -  
Washington Suburban Sanitary  
Commission (WSSC)

**American Heat and Power and Industrial Furnace Company** worked with Constellation Energy Projects and Services group (CEPS) to provide WSSC with a turnkey energy savings project. The project will significantly reduce the amount of natural gas required to thermally process biosolids (sludge) produced by the Western Branch WWTP in their existing furnaces.



The project consists of upgrades, improvements, and equipment additions to the two existing Multiple Hearth Furnaces (MHFs) located at the Western Branch WWTP. The improvements will reduce gas consumption by approximately 75%, improve emission performance, return original rated thermal processing capacity, improve controls, and significantly reduce slagging, resulting in lower maintenance costs.

The purpose of the project is to modify and upgrade the existing Multiple Hearth Furnaces to provide a significant and measurable decrease in energy usage and the associated cost of purchased fuel. The modifications will increase the efficiency of the process, recover a portion of the wasted heat, and take full advantage of the heating value of the sludge in order to significantly reduce, and under some conditions eliminate entirely, the need for purchased natural gas for the operation. The modifications will also improve emissions performance, resulting in the ability to operate the furnaces up to their full rated original design capacity.