

Wheelabrator Bridgeport, L.P.

A Waste Management Company



Located in Bridgeport, Connecticut, the Wheelabrator Bridgeport waste-to-energy facility provides dependable, environmentally safe disposal of municipal solid waste for more than two dozen towns and cities in the Greater Bridgeport area, while generating clean, renewable electricity for sale to the local utility. Designed, constructed and operated by Wheelabrator, Wheelabrator Bridgeport processes up to 2,250 tons per day of municipal solid waste. Wheelabrator Bridgeport has an electric generating capacity of 67,000 kilowatts; the equivalent of supplying the electrical needs of 83,000 Connecticut homes.

Modern waste-to-energy facilities differ significantly from old-fashioned municipal incinerators, which had minimal, if any, air pollution control systems and did not recover any of the energy released during the combustion process.

Waste-to-energy facilities use municipal solid waste (MSW) as a fuel to generate electricity in almost the same way as traditional power plants produce energy. Waste-to-energy plants use trash as fuel, thereby converting MSW into renewable energy that helps the U.S. decrease its dependence on foreign fossil fuels.

The waste-to-energy process starts with incoming truck deliveries to an enclosed reception area where MSW is unloaded into concrete storage pits. Overhead cranes then transfer trash into a feed hopper to the boiler. Inside each boiler, an inclined, reciprocating, metal grate slowly moves the trash through the thermal process, where temperatures exceed 2000°F. The large utility-type boilers are designed to recover thermal energy in the form of high-pressure steam that is converted into electrical energy in the turbine-generator. With access to existing steam distribution lines, waste-to-energy facilities can produce and sell both steam and electricity.

Waste-to-energy plants utilize advanced environmental control systems that clean emissions to meet stringent state and federal environmental standards while producing clean energy...“with less environmental impact than almost any source of electricity.” (Source: U.S. EPA)

After the trash is completely processed, ferrous metals are separated from the ash residue for recycling and the overall volume of incoming trash is reduced by more than 90%. The recycled metal offsets the need to mine virgin materials for new products.

Over the past 30 years, communities have turned to source reduction, recycling, and waste-to-energy to manage their MSW. In the U.S., communities with waste-to-energy plants have higher recycling rates on average than those that do not. (Source: Energy Recovery Council)

A wholly owned subsidiary of Waste Management of Houston, Texas, Wheelabrator Technologies Inc. is a leader in the safe and environmentally sound conversion of MSW and other renewable waste fuels into clean energy. Wheelabrator’s 17 waste-to-energy facilities provide safe waste disposal for towns and cities across the U.S. Wheelabrator also operates five independent power plants designed to generate electricity using an assortment of fuels, including waste wood, tires, waste coal and natural gas. In addition to producing electricity, some of these facilities also produce steam sold to nearby government and commercial establishments. Wheelabrator’s 22 facilities have a combined electric generating capacity of 896 megawatts, enough energy to power more than 985,000 homes.

GENERAL	
Area Served	Greater Bridgeport
Type of Contract	Design, construct, operate
Commercial Operation	1988
REFUSE COMBUSTION	
Boiler Operation	24 hours a day, 7 days a week
Process Lines	3 @ 750 tons per day
Feed System	2 Overhead cranes with ram feeders
Grate Design	Von Roll reciprocating grates
Combustion Temperature	2500°F+
Waste Volume Reduction	95%
AIR QUALITY CONTROL	
Type of Equipment	Spray drier absorbers, fabric filters, carbon injection
ENERGY PRODUCTION	
Type of Energy	Electric power
Steam Flow to Turbine	576,000 pounds per hr @ 850 psig/825°F
Electric Power Capacity	67 megawatts/83,000 homes
Cooling System	Mechanical draft cooling tower