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The Status Of Waste-To-Energy In The U.S.

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ABSTRACT

This paper provides an update on the status of waste-to-energy in the United States. It features a breakdown of operating plants by technology, the relative contribution each technology type makes in terms of managing municipal solid waste, and the role of waste-to-energy compared with other management options. The paper also provides a regional look at operating plants, some key insights at the state level, plus the type and amount of materials recovered on-site at waste-to-energy operations for subsequent recycling. Particular emphasis is placed on the use of combustion ash in various beneficial applications. In addition, the latest air pollution control trends relating to waste-to-energy operations are addressed. Also, waste-to-energy community recycling rates are examined and compared with national recycling statistics. Finally, a summary of States recognizing waste-to-energy as a renewable resource is provided. The paper demonstrates the on-going vital role waste-to-energy plays in helping to manage waste in the U.S.

OVERVIEW

As of January 2005, there are 89 waste-to-energy facilities operating in 27 states in the U.S. (See Table 1) generating the energy equivalent of nearly 2,700 MWh of electricity and disposing of nearly 29 million tons of trash. Waste-to-energy facilities include the following technologies:

- Mass Burn (MB) waste-to-energy plants generate electricity and/or steam from trash by feeding mixed municipal waste into large furnaces dedicated solely to burning trash and producing power.
- Refuse-derived fuel (RDF) waste-to-energy plants remove recyclable or unburnable materials and shred or process the remaining trash into a uniform fuel. A dedicated combustor, or furnace, may be located on-site to burn the fuel and generate power; or the RDF may be transported off site for use as a fuel in boilers that also burn fossil fuels.
- Modular (MCU) waste-to-energy plants are similar to mass burn facilities, but the modular units typically are smaller, prefabricated off-site, and more quickly assembles where they are needed.