



MIDWEST
Environmental Services, Inc.

Waste to Energy

The enormous increase in the quantum and diversity of waste materials generated by human activity and their potentially harmful effects on the general environment and public health, have led to an increasing awareness about the urgent need to adopt scientific methods for safe disposal of wastes. While there is an obvious need to minimize the generation of wastes and to reuse and recycle them, the technologies for recovery of **energy to waste** can play a vital role in mitigating the problems. Besides recovery of substantial energy, these technologies can lead to a substantial reduction in the overall waste quantities requiring final disposal, which can be better managed for safe disposal in a controlled manner while meeting the pollution control standards.

Midwest Environmental Services, Inc., working with their partners in the industry, is focused in their desire to uncover a host of Waste-to-Energy Conversion Pathways. **Thermochemical Conversion**, allows for the combustion of waste as a way of reducing waste volume and neutralizing many of the potentially harmful elements within it. Thermochemical conversion includes incineration, pyrolysis and gasification. **Biochemical Conversion**, which includes anaerobic digestion and fermentation, are preferred for wastes having high percentage of organic biodegradable (putrescible) matter and high moisture content. Organic waste from various sources is composted in highly controlled, oxygen-free conditions circumstances resulting in the production of biogas which can be used to produce both electricity and heat. Anaerobic digestion also results in a dry residue called digestate which can be used as a soil conditioner. **Physico-chemical Conversion**, involves various processes to improve physical and chemical properties of solid waste. The combustion fraction of the waste is converted into high-energy fuel pellets which may be used in steam generation.

While some still confuse modern waste-to-energy plants with incinerators of the past, the environmental performance of the industry is beyond reproach. An environmentally sound and techno-economically viable methodology to treat biodegradable waste is highly crucial for the sustainability of modern societies. A transition from conventional energy systems to one based on renewable resources is necessary to meet the ever-increasing demand for energy and to address environmental concerns. To learn more, do your part and contact a Midwest Environmental Services, Inc. representative and lets all get started today.

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