Yesterday's Greenwire featured a story profiling the use of a municipal solid waste (MSW) facility in Alexandria, Virginia that turns roughly 5,000 tons of trash generated by staff, members, and visitors at legislative buildings of the House of Representatives into enough electric power for 250 homes. The decision to switch from an on-site composting facility and use of corn-based utensils, to a MSW facility has some observers guessing that it could rekindle an interest in expanding the growth of the "energy recovery" industry - perhaps even in state renewable programs and rules.

Energy recovery and MSW plants are common throughout the world in countries with high population density and limited landfill space. Nations like Denmark, Japan and Singapore are some of the more enthusiastic utilizers of waste-to-energy because of strict laws limiting landfill waste. There are some 400 waste-to-energy plants across the EU and five nations (Germany, Belgium, the Netherlands, Austria, and Sweden) now send less than 1% of their waste to landfills.

Waste-to-energy facilities essentially converts non-recyclable waste materials into useable heat, electricity, or fuel through combustion, gasification, anaerobic digestion, and landfill gas (LFG) recovery processes. A 2008 EPA study found utilizing MSW was a better alternative than simply landfilling waste which over time releases methane, a greenhouse gas that is 20 times more potent than carbon dioxide. The agency went on to find that landfills are the second largest source of human-caused methane emissions in the country - representing 22 percent of the US total. The potential impact of expanding waste-to-energy could be substantial for power generation and reduction in landfill space considering that Americans throw away nearly 400 million tons of trash per year - roughly 7 pounds per person per day - with nearly 70% going to landfills.

The plant profiled in the Greenwire piece is run by Covanta Energy which owns or operates 44 facilities across North America that converts 20 million tons of trash annually into more than 9 million megawatt hours of electricity. Nationwide, there are 85 waste-to-energy facilities across the country which remove approximately 26 million tons of waste that would normally go into landfills - according to a fact sheet by the Energy Recovery Council (an industry group that supports expansion and utilization of MSW). As of April 2013, the group has documented that 31 states and 2 territories define waste-to-energy as a renewable energy technology under its various statutes and regulations. However, only 21 states allow waste-to-energy to qualify under its renewable portfolio standards. According to the Center for American Progress, Connecticut has the highest percentage (70%) of its non-recyclable waste going to MSW facilities.

Some environmental groups oppose the use of MSW facilities and their expansion because the vast majority of waste that ends up in landfills is potentially recyclable. A scientist with the Natural Resources Defense Council, Allen Hershkowitz, estimates that some 80% of waste that ends up in US landfills could be recycled and that communities and states would be better served by enforcing or increasing recycling rates. Other groups contend that waste-to-energy plants emit pollutants like particulates, mercury, dioxins, and other heavy metals through the incineration process. Industry supporters note that many of the air quality concerns raised about MSW are related to older facilities.
that do not employ maximum achievable control technology or MACT on their incinerators. Further, they note that according to an EPA analysis (10), the combustion of one ton of waste at an MSW facility can prevent the release of one ton of greenhouse gases from being emitted into the atmosphere. Technologies like waste-to-energy are not a panacea and groups like the Center for American Progress have suggested, along with increased recycling rates, the use of these facilities with modern technology can however be an important compliment to helping reduce greenhouse gas emissions as well as the need for virgin, raw materials thus minimizing impacts to natural resources. For example, the Covanta plant in Virginia uses large magnets to extract metal from trash that may be incinerated which the company then sells on the scrap market. On average, the plant sends four dumpsters a day worth of metal for recycling and reuse.

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