

INTERNATIONAL  
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## Waste-to-energy plants a waste of energy, recycling advocates say

By Erica Gies

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**SAN FRANCISCO:** Promoters of waste-to-energy incinerators - plants that burn trash to generate electricity - praise the practice as renewable energy with a negative carbon footprint.

Nonrenewable materials, including plastic waste and used tires, account for 41 percent of U.S. trash, according to a report published in 2006 by the U.S. Environmental Protection Agency, known as the EPA.

"To most people it sounds great," said Linda Christopher, executive director of the GrassRoots Recycling Network, a U.S. environmental advocacy group. "It's something that you don't want, you put it in the incinerator, you get energy."

Still, say Christopher and other activists, these materials are not so bountiful that society can afford to burn them.

"We are depleting our environment at a much faster rate than that at which resources can be replaced," said Dave Ciplet, U.S. coordinator for the Global Alliance for Incinerator Alternatives, an international group that lobbies against waste incineration.

Trash has more economic value and a lighter impact on climate change when reused, recycled or composted than when incinerated or placed in a landfill. Burning valuable materials that could be recycled "wastes the life cycle energy of products to produce a small amount of energy," Ciplet said.

The EPA largely agrees with this assessment and advocates a ranking of waste management practices. Reducing the need for new materials should be the top priority, followed by reuse, recycling, waste-to-energy incineration, and placement in a landfill, it says.

In 2007 the United States had 87 waste-to-energy plants that generated approximately 2,720 megawatts, or about 0.4 percent, of total U.S. power generation, according to the Integrated Waste Services Association.

Recycling advocates want communities and companies to commit to a zero waste target, which they argue would aid the economy and help put the brakes on climate change. "Zero waste is the idea that garbage isn't inevitable but it's really a result of bad design," said Christopher, the recycling campaigner. "We can rethink these processes and design garbage out of the system."

Frank Ferraro, vice president for public affairs at Wheelabrator Technologies, which operates 16 U.S. waste-to-energy plants, is sympathetic, but skeptical.

"Certainly those are laudable goals," he said. "But the history of trash in this country and the culture we have in this country leads us to believe there's still going to be a lot of trash out there for many years to come."

In 2006, the United States generated 251 million tons of trash, according to the EPA. Of that, 32.5 percent was recycled and 12.5 percent was incinerated for energy.

Some communities, including Seattle; Oakland, California; and several counties in the state of Vermont have adopted zero waste goals, which they hope to achieve by 2015 or 2020.

Ferraro disagrees, but advocates say waste-to-energy plants reduce recycling rates because recycling facilities and incinerators compete to use the same waste.

To operate at maximum efficiency, the incinerators burn trash continuously. Because they are expensive

to build, they typically have 20-year or 30-year operation contracts to make them economically viable. "Communities sign 'put or pay' contracts, which means they either put in their waste, or they pay money," Ciplet said. "If they want to start recycling more, they have to pay the incinerator operator."

Wheelabrator says that its incinerators generate energy with negative carbon emissions. The energy they create would otherwise be generated with fossil fuels.

Diverting trash from landfills, moreover, reduces the generation of methane, a potent greenhouse gas produced by decomposing trash in landfills. Although most landfills capture methane and process it into energy, the EPA estimates a 25 percent leak rate, for which Wheelabrator calculates a credit.

The company also points out that it recovers metals from incinerator ash, avoiding greenhouse gases expended in mining.

Ciplet, however, said that the company's calculations were incomplete. Accurate carbon accounting should weigh the entire life-cycle potential of the materials burned. "Waste-to-energy plants are actually much better characterized as a waste of energy," he said. "By recycling materials, you conserve three to five times more energy than is generated by incinerating them."

A newly published report from the Institute for Local Self-Reliance - of which Ciplet was one of the authors - argued that landfills, incinerators and extractive industries should receive no government subsidies. Indeed, it said, the U.S. government should follow the example of some European countries and consider taxing them to finance recycling programs.

"This is really a question about how you use public money," Ciplet said. "Do you invest it into a dinosaur technology that's going to be around for 30 years, that's going to demand to be fed a constant supply of resources in a greenhouse-gas-intensive way? Or do you put that money into creating infrastructure to reuse resources in the community?"

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