



Don't trash waste-to-energy plants

By NICKOLAS THEMELIS

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Some environmentalists are arguing on behalf of the concept of Zero Waste today. They say if you ban landfills and incinerators, people will reduce, recycle and compost and there will be zero waste, despite the fact that there is not one community in the nation or in the world that has come even close to this goal.

Massachusetts tried this some two decades ago when it imposed a moratorium on new landfills and new incinerators to encourage recycling. Unfortunately, you can't wish waste away and getting to zero proved to be much harder than a lot of government officials imagined. Reality forced the state to lift the moratorium on building new landfills more than a decade ago. Even with that, the commonwealth is exporting more waste to other states than ever before and its recycling rate has grown stagnant. Now the state is once again contemplating what it must do to achieve its recycling goals and whether the commonwealth should maintain its moratorium on waste-to-energy (WTE) facilities to achieve that goal.

As director of the Earth Engineering Center at Columbia University (www.columbia.edu/cu/earth) that has studied all aspects of waste management extensively, and a resident of Sandwich, I urge the Massachusetts Department of Environmental Protection to lift the moratorium on WTE. Sustainable waste management requires a comprehensive approach for dealing with municipal solid waste that, unavoidably, must include WTE. Sandwich and Cape residents learned that first hand several years ago.

My mother, Emily Carras, was a high school teacher on the Cape where we built a house in East Sandwich that is now my permanent home. Both of us were absolutely delighted 15 years ago when the Sandwich landfill on Route 130, just north of Route 6, was closed forever and in its place was developed a state-of-the-art waste transfer and recycling station. That landfill, and at least 40 others all the way from south Boston to the Cape and the Islands, were closed in the early '90s because at least as many communities, enterprising businessmen and government officials had the foresight to collaborate in the building of a large "incinerator," the SEMASS waste-to-energy facility near Rochester.

Several of my graduate students and I have visited SEMASS to review its operations. It combusts annually about 1 million tons of municipal solid wastes, generates nearly 600 million kilowatt-hours of electricity and recycles nearly 40,000 tons of metals annually. We have examined its operation in great detail because it was one of the 10 finalists in a 2006 Columbia University competition for "one of the best WTE facilities in the world." Its emissions are as low as those of recently built WTE facilities and well below the strict Environmental Protection Agency and also European Union environmental standards for such facilities. For the record, the total "toxic dioxin/furan" emissions of SEMASS, a favorable scarecrow of some environmentalists, are less than half a gram annually, the weight of a cigarette butt.

Despite this extraordinary performance, some extremist environmentalists have argued against building new WTE facilities in the state although such facilities would prevent the in-state landfilling of 1.6 million tons and the export of another million tons to distant landfills.

Is it really better to build more and more landfills that have a finite lifetime of about twenty 20 years rather than generate electricity from waste?

If the Sierra Club and other organizations opposing WTE examined the facts, as my students have to do while working on their theses, they would be hard pressed to say yes. They would realize that if SEMASS had not been built, the 40 landfills that were closed from 1991 to 1995 would have been replaced by another 40 by now, either in state or out of state. Overall, we have estimated that SEMASS in its 21 years of existence, has avoided the conversion of 306 acres of greenfields to landfills; generated nearly 11 billion kwh of electricity; recovered 800,000 tons of metals; and avoided the equivalent emission of 20 million tons of greenhouse gases.

So why the continued, misguided opposition to waste-to-energy facilities?

The last-resort argument of "environmental" groups is that incinerators impede recycling. This is simply not true. In Sandwich, we recycle close to seven types of wastes and send the non-recyclable materials to SEMASS. In fact, the most environmentally minded nations in the world, such as Denmark and Germany, recycle the most, combust the most, and landfill the least. Earlier this year, the World Economic Forum noted that WTE is one of the large-scale technologies that can help communities achieve a low-carbon infrastructure.

It is interesting to note that when we compared the waste management practices of the commonwealth to New York and California, Massachusetts was far ahead. On a per-capita basis, Massachusetts residents generate less waste than New Yorkers and much less than Californians. They also landfill less, thanks to our current WTE facilities. It is clear that if communities in the commonwealth had not had the foresight decades ago to build WTE facilities, when energy was dirt cheap and global warming not a concern, the state would be landfilling twice as much as it is now.

It is incredible that environmental organizations like the Sierra Club and even some state environmental officials are not aware of the above facts and want to turn back the clock by opposing WTE. Effective recycling and combustion with energy recovery of post-recycled residues made the state an environmental leader before the world even knew the implications of global warming. Now with the prospect of landfilling even more waste in-state and exporting waste out of state, the commonwealth should choose sustainable waste management and that includes waste to energy.

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