

BIOCYCLE[®]

Zero Landfill Is Not Zero Waste



BioCycle July 2011, Vol. 52, No. 7, p. 44

Commentary

Eric Lombardi

THE Zero Waste movement is more than just a vision. It is a movement that is actually changing the world. To prove it, I recommend visiting GreenBiz.com and in the search box type “zero waste.” You will be amazed, as I was, at the tsunami of business activities over the last couple of years related to the idea of totally eliminating waste from our manufacturing, distribution and collection systems. However, a new problem is now emerging, and that is the idea that landfills are the sole villain here when in fact burning mixed waste is just as bad or worse.

Not using the landfill has got to be good news, right? Yes and no. The good news is that managing our discards as a resource is finally getting attention at the highest levels in the business sector from executives who can impact a large volume of materials. The business leader’s green impact comes from minimizing material purchase/consumption, product design and decisions about discard management systems.

The bad news is that some CEOs are learning that “zero waste to landfills” is Zero Waste, and it isn’t. The problem with having a singular focus on the landfill implies that making energy from waste by burning it is acceptable. Waste-to-Energy (WTE) is a disposal technology that destroys resources forever; it makes things “go away,” and doesn’t reduce waste or protect natural resources.

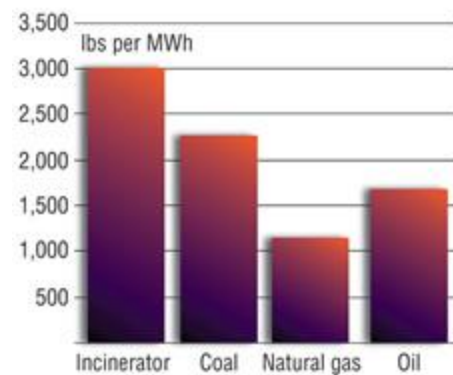
There are legitimate businesses making great strides toward Zero Waste, like Subaru with their 97 percent diversion. But companies that tout “Zero-Waste-to-landfill” and then burn half of their discards are greenwashing.

BURNING ISN’T ZERO WASTE

The pioneers of the Zero Waste movement in the U.S. — and I count myself as one of them — were very clear in the mid-90s that zero waste to landfill was not the same thing as Zero Waste. Zero Waste is about making the best choice with our natural resources — from extraction to production to consumption to disposal. It involves a constant evaluation about our materials’ choices and a strong commitment to eliminating waste, not just treating it.

We were, and continue to be, very clear on our view that the current WTE technologies in the marketplace are actually a waste of energy, money and natural resources. For all the fancy talk about “conversion technologies” (including plasma, gasification and pyrolysis), the workhorse of the industry remains mass burn systems that make some of the dirtiest, most expensive electricity on the planet. WTE makes no sense environmentally, economically or socially: it has the most greenhouse gases (GHG) per fuel type, its emissions contain dangerous air pollutants, it’s the most expensive form of electricity, and it fails to create a fraction of the jobs created by recycling and composting. And WTE produces only a fraction of the energy that can be saved through recycling. Table 1 (U.S. Energy Information Agency) and Figure 1 (USEPA) support that harsh assessment.

Figure 1. Total CO₂ emissions per fuel type



Not all companies have fallen prey to the zero waste to landfill message. Some businesses are embracing true Zero Waste as a guiding principle and doing great work. For example, Xerox has been redesigning products for years to reduce the number of parts so models can be more interchangeable. BMW has reduced the number of different types of plastics it uses so more of the car can be recycled more quickly. And Amazon.com’s frustration-free packaging program moves manufacturers from plastic clamshells and wire ties over to recyclable cardboard, saving resources and fostering better customer satisfaction.

Today the challenge we have in creating Zero Waste Communities is that it takes time — but not a lot of time, mind you. Fresno, California jumped from 29 percent to 71 percent in just six years, and many businesses are hitting 90 percent recovery targets well ahead of schedule. Eco-Cycle believes communities can transition to Zero Waste within 10 years, and has created a generic 10-year “bridge strategy” to do so. Our plan proposes definitive programs, policies and infrastructure. A ten-year timeline broken into three phases to implement them all is a reasonable average. In years 1 to 4, a community achieves 50 percent; in years 5 to 8, it achieves 70 percent. Years 9 and 10 are the final challenging push to 90 percent. The journey begins with voluntary participation and ends with mandatory source separation in every home, business and institution.

But even after we get to a 90 percent recovery rate, we may still have about 10 percent of nonrecyclable, noncompostable and nonreusable discards that will need to be treated. That’s when we can talk about “Zero Waste and Bio-Energy.” The cleanest and safest way forward on dealing with this “residue” is to follow the three-step German approach: sort out any remaining recyclables, “biostabilize” the residue in an anaerobic digester to capture the biogas and use it for energy, and landfill the remaining inert material in a dry tomb landfill. Even better would be to follow the Italian lead and sort out all the nonrecyclable items in the residue, identify who made and marketed them, and then pressure these companies to redesign for Zero Waste.

But what we need now is to draw a line in the sand between a true commitment to Zero Waste and those that might want to stop at just zero-waste-to-landfill. I applaud groups like the Green Manufacturers Network for creating a workshop about waste and companies like Subaru

legitimately looking at how to better use and recover our limited natural resources. They are recognizing a planet in crisis and making smart business decisions to succeed in a world of declining resources and growing populations. But it is important that the message go out loud and clear that zero waste to landfill is NOT Zero Waste. The true goal of Zero Waste is not just zero waste to landfill or zero waste to energy, but redesigning our entire cycle of resource extraction, consumption and discard management so no resources are wasted at any point along the way.

Eric Lombardi is the Executive Director of Eco-Cycle, Inc. (www.ecocycle.org) and is recognized as an authority on the social and technical aspects of creating community-based “Zero Waste” resource recovery programs. Lombardi has experience internationally as a consultant and public speaker, and was invited to the Clinton White House in 1998 as one of the Top 100 USA Recyclers. Eric is also a cofounder of the U.S. GrassRoots Recycling Network (www.grrn.org) and the Zero Waste International Alliance (www.zwia.org).

[Copyright 2011, The JG Press, Inc.](#)