

ScienceWatch: What's the bottom line on plastics recycling? For some, it's a PET project paying dividends down the road; to others, the payoff is just not worth the effort.

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Washington-- When the Coca-Cola Co. declared nine years ago that it would use recycled plastic in its soft drink bottles, Thomas Duff dismissed the announcement as a "public relations exercise." "They've lost track of the economics," said Duff, president of Wellman Inc., the largest plastics recycler in the country. He predicted the recycling initiative --- announced with fanfare and promises of "closed loop" recycling of plastic bottles --- would not last long because it was impractical. He was right.

Within three years, Coke had quietly dropped the recycling program. Now, a national campaign headed by the GrassRoots Recycling Network of Athens, is trying to pressure the huge soft drink company into resuming it.

But Duff said the problem is not insufficient demand for recycled material by Coke and other users, but the fact that so few bottles find their way into the recycling business.

"Every bottle that comes in through recycling gets used right now," Duff said. "It displaces a certain amount of plastic from the market. If Coke or anyone else starts buying recycled plastic, other users will just be forced to go to virgin resin market."

In the end, Duff said, very little more polyethylene terephthalate, or PET, the material used in the bottles, will be recycled.

Coca-Cola spokesman Bill Hensel said recycled PET is being used in some plastic bottles used by Coke bottlers, absent the kind of corporate commitment the GrassRoots Recycling Network is pushing. Also, recycled glass, aluminum and iron go into other Coca-Cola containers, he said.

But the argument goes to the heart of a swelling debate over America's commitment to recycling.

Despite mandates by some states, notably California and New York, that at least 50 percent of all municipal solid waste be recycled by the end of next year, some experts say the country has just about reached a practical recycling limit of between 25 and 30 percent.

"If you look at it semi-realistically, I don't see how you can get much more than this," said Winston Porter, former assistant administrator for solid waste at the Environmental Protection Agency.

As a result, cities and counties in states with the 50 percent mandates may face a "trash 2K" problem next year, required by state law to operate recycling programs that will result in products that are worth significantly less than the cost of reclaiming them, Porter said.

Porter, now head of a Leesburg, Va., consulting firm, the Waste Policy Center, set EPA's national goal of recycling 25 percent of the nation's solid waste when he was at EPA in 1989. It's neither economical nor wise, he contends, to push the process further.

"Composting doesn't make much sense when you spend \$10 to make a \$2 product," he said.

Scott Seydel, president of Atlanta-based EvCo Research Inc., agrees with Duff that there is no shortage of ways to use recycled PET. The company operates a factory at Pendergrass, where it converts chips of recycled bottles into a substance that can be added to paper fibers used to make water-resistant boxes for shipping fresh meat and other food products.

The company has developed and patented other uses for recycled PET, including shoe liners, nontoxic treatment for wood products, pallets for shipping and soil-repellent coatings for carpet fibers.

"We can set up a plant for around a million dollars that will turn a half-billion PET bottles into useful liquid coatings and adhesives or binders that can be used anywhere that water, oil, or stain resistance is needed, or anywhere someone wants something to stick together," Seydel said. "We won't ever run out of raw materials because the use of PET plastics has grown in double digits almost every single year since being introduced (except 1985-1986)."

That's what worries people like Bill Sheehan, coordinator of the GrassRoots Recycling Network. The National Association for PET Container Resources, an industry group, estimates that almost 25 percent of the PET produced in America

is recycled. The production of new PET continues to outpace slight growth in the quantity that is recycled, a trend that will accelerate with the introduction in the past few months of PET beer bottles by Millers Brewing Co.

Sheehan and others believe ingrained habits and policies have distorted the way America handles waste. Garbage-hauling firms make much more profit from compacting municipal solid waste and disposing of it in a landfill than through recycling, he said. At the other end of the resource stream, Sheehan said, are tax breaks and government policies that subsidize the use of virgin materials.

Coca-Cola spokesman Bill Hensel said the company has not "renege" on a promise to recycle PET, as Sheehan's group charges. Instead, he said, it agreed to try the idea, and "it just wasn't economically feasible." Although Coca-Cola uses about 10 billion plastic bottles a year in the United States, Hensel said he enjoys informing print journalists that newsprint is the largest segment of solid waste going into America's landfills. He said soft drink containers of all kind represent less than 1 percent of the total.

According to a recent EPA report, the country's municipal solid waste stream in 1996, the most recent year for which statistics are available, included 41.4 million tons of paper and paperboard, 29 percent of which was reclaimed and recycled. The stream included 5.3 million tons of plastic, of which a "negligible" quantity was recycled, EPA said.

"It costs so much for us to reclaim, clean and recycle PET that we would have driven the price up for ourselves and everyone else," Hensel said.

To Sheehan and others, such as William Worrell, manager of the San Luis Obispo County Integrated Waste Management Authority in California, that's the point. The increased value, they said, would stimulate more vigorous recycling efforts. Recyclable PET was selling for around \$6 a ton last week, according to Waste News, an industry publication. Aluminum cans were bringing \$33 a ton, and newsprint from \$5 to \$95 a ton, depending on the grade.

"How come aluminum cans are recycled at the 80 to 90 percent rate and PET bottles at around 30 percent?" Worrell asked. "If Coca-Cola and the others would use recycled material, the price of PET would go up and there would be greater recycling."

Seydel said Coke is a PET "pioneer --- not a villain."

"But the GrassRoots Recycling Network and Container Recycling Institute are heroes too because they want the folks who put the PET in the cosmos to be good stewards of where it goes after they've made their money," he said. "I

don't see their differences as being nonreconcilable. It's probably time for a summit of sorts."

ILLUSTRATIONS/PHOTOS: At the Seydel plant in Pendergrass, research chemist Clint Varnadore sits before a reactor./ JEAN SHIFRIN / Staff

Small reactor used to convert recycled bottles into PET./ JEAN SHIFRIN / Staff

USES FOR RECYCLED PET

1. Fiber, 59 percent
2. Sheet and film, 13 percent
3. Strapping, 9 percent
4. Non-food containers, 7 percent
5. Food and Beverage containers, 7 percent
6. Engineered resins and molding compounds, 4 percent
7. Other, 1 percent

Source: National Association of PET Container Resources, Charlotte, NC

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