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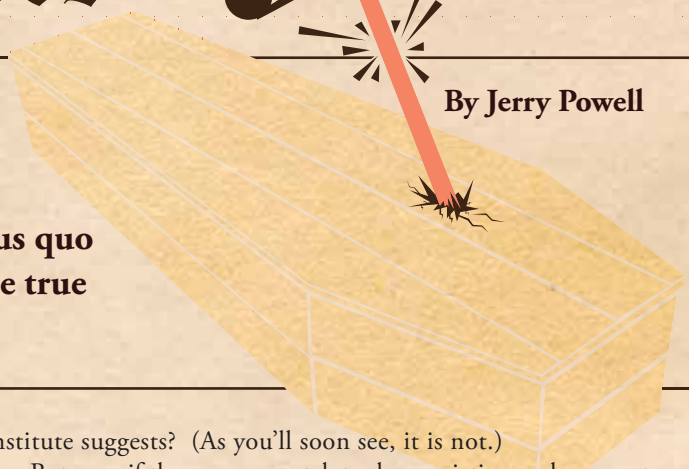
RESOURCE RECYCLING

Death to recycling rates



Published recycling rates have long been slurred as white lies at best, and pants-on-fire at worst. Our author calls out the worst of the worst and makes an argument for changing the current status quo to a more honest way of letting everyone know the true benefits of recycling.

By Jerry Powell

As everyone in recycling probably knows, Monroe County, Florida has America's top recycling rate. The county was able – in just one year and at no expense – to push its recycling rate from a mere 10 percent to a supremely astounding 167 percent. And it did so without employing a Monroe County-only rate methodology. No, in fact, the county used a rate calculation method prescribed in state law.

You might ask: How was this governmental body able to move so quickly to the top of the heap? The county merely employed the new definition of "recycling" in Florida, which says that wastes sent to an incinerator are "recycled."

Before you guffaw in horror, please assess the recycling rates posted by other governments, businesses and industry groups. You'll have to look far and wide to find a true and accurate rate. While other rate makers may not employ similarly egregious techniques as Monroe County, the level of hoodwinkery is mind-boggling. More on this later. Poor analytical methods raise real questions about the utility of recycling rates. How can one make reasonable corporate and governmental recycling decisions and plans if the current data is false and inflated? In fact, overstated rates may have impeded, rather than helped, recycling's growth in recent years. Why would anyone invest heavily in a ferrous scrap recovery operation, for example, if the steel recycling rate was truly at 83 percent, as the Steel Recycling Institute suggests? (As you'll soon see, it is not.)

But even if the governmental, trade association and corporate data and analyses were accurate, is a recycling rate really useful? Does it tell us what we really want? Many of recycling's best minds (thus excluding this writer) say that we need to begin to measure and report the results of recycling actions using other metrics.

Is it time for change?

To paraphrase Mark Twain, in recycling, there are liars, damn liars and statisticians. Once we chose to make evaluations and comparisons in recycling according to a weight-based recycling rate, all sorts of devious – and not-so-devious – methods were generated. When truly honest calculations paled in comparison to the "rates" produced through sleight of hand, everyone was forced into the slime pit.

We do not have enough room in this article to articulate all of the magic tricks used, but we can offer a few of the best.

Loosen the boundaries

At one time, Michigan included in its recycling rate the auto bodies purchased by in-state shredding operators from neighboring Ohio.

Newark, New Jersey was previously the champion of this scam. As an industrial city, Newark has numerous scrap yards and recovered paper processing plants serving the region. Materials generated in the leafy suburbs find their way to the facilities in

gritty old Newark. In order to be able to brag that Newark had the Garden State's highest recycling rate, city officials gathered data from all these regional processors, never asking if all this material was actually generated in the city.

Count anything processed

California allows municipalities to count alternative daily landfill cover as a recyclable, even though this material ends up as part of the landfill. I've never seen a California community that receives an ADC credit re-post its rate to incorporate only true recycling. That would take guts.

Don't accurately account for imports and exports

Some trade groups purposefully mishandle import and export data when calculating the annual recycling rate for a material or product. For instance, the Institute of Scrap Recycling Industries, the Can Manufacturers Institute and the Aluminum Association work together annually to estimate the level of aluminum can recycling. Included in the amount of cans recycled are exports, such as cans from the U.S. sent to Asian consumers. That's reasonable, and similar data are used in calculating the recycling rate for other materials and products. But the Big Three also include can imports to the U.S., especially containers from Canada and Mexico. This trick moves the aluminum can recycling "rate" up a few percentage points over what is the true rate.

Expand the definition of a recyclable

The purpose of a recycling rate is to indicate how much stuff that would typically end up in a landfill or incinerator does not because of consumer, governmental and corporate action. We call this post-consumer materials recovery and recycling. That said, a heck of a lot of the raw material used at a steel or paper mill, for example, is not post-consumer material. It is material that has never been landfilled or burned, but is sought by these consuming mills.

This additional material comes in two forms. All makers of materials – glass, plastic, paper or metal – generate reusable stuff at the mill site. When a giant roll is finished at a paper mill, the changeover to a new roll often results in paper ending up on the mill floor. This paper is fed back into the pulper. Just the same, when a glass container plant produces some misshapen bottles, they are remelted on site. These types of materials are often called revert scrap or mill scrap.

A second source of non-postconsumer material is industrial scrap. Trimmings, clippings, turnings and other forms of scrap are generated anytime you use a material to make a product. This stuff has never been landfilled or burned, and because it is clean and comes in fairly high volumes from one site, such as a box plant or a window maker, it is highly sought.

Now one devious way to boost a recycling rate is to include mill and/or industrial scrap in the rate calculation. The steel and paper industries do this with impunity. It would be fine if the steel industry would tell us, say, that their 83 percent recycling "rate" was made up of 12 percentage points of mill scrap, 18 percentage points of industrial scrap and 53 percent of post-consumer scrap. But the industry does not provide this analysis, though it has the data.

Expand recycling's definition to include waste-to-energy

Monroe County, Florida. Enough said.

Fudge the definition of solid waste

Governmental officials in Wisconsin used to argue that the state had an outrageously high recycling rate. They attained that level by including fly ash in both the numerator and denominator. Others are now including concrete and asphalt recovery volumes in the definitions of solid waste and recycling, even though these materials are not handled by municipal solid waste disposal facilities.

Report only collections, not what was sold

Many local governments calculate their recycling rate according to how much trash and recyclables were collected. These calculations never take into account the contaminants in the recycling carts.

Never sort a bale

Even if a community uses sales data, rather than collection figures, it never really calculates how much recyclable fiber, plastic or metal was shipped. If a tenth of a bale's weight is contaminants, so what?

Do the one-, two-, three-count dance

A perfect way for a state to boost its recycling rate is to over count. Ask all the collectors how much they picked up last year. Then get data from all the processors. Finally, seek data from the mills in the region. Now make sure to not check for duplication. Merely add all the numbers, and bingo! A stunningly high recycling rate.

If you're a net waste exporter, count only in-state disposal

Cooking the books can involve cheating on the denominator. In the U.S., states with high population densities send garbage to more rural states. So if your state sends out more garbage than it takes in, make sure to only use in-state disposal numbers.

Give bonus points

Some states want to provide incentives to local governments to pursue waste reduction techniques. That is a good idea. But the states then give "recycling rate" bonus points for such actions. This is methodological hooey. Waste reduction successes already lead to a reduction in the denominator. Thus, you give double benefits.

Provide no data

A key to this chore of jacking up the recycling rate is to keep it a secret. Never issue all the data, and never provide citations for all the sources. Develop elaborate firewalls to protect your rate. Do not allow an independent third-party access to the data and methodology. And never question your own work.

It's unfair to say that rate scamming has never been addressed. Concerns in the mid-1990s about the variety of methodological techniques being used by state solid waste management agencies led to a multi-stakeholder initiative, with the U.S.

Environmental Protection Agency being the convener. After some months of work, a reasoned methodology was produced. But the methodology never attained widespread use. Why? Because if many states switched over to the new, clean method of calculating recycling rates, they'd have to explain why the new rate was lower than rates issued in previous years. Continued cheating won out over honesty.

More important than the fact that most recycling rate calculations approach worthlessness is the question of their purpose.

Weight is a lousy measure of a good recycling system. We measure gross tons, not net tons, so we really have no accurate measure of how much was actually recycled. Recycling rates typically do not distinguish between more desired actions, such as the closed-loop recycling of a glass bottle into a new container, versus less desired actions, such as non-closed-loop recycling efforts, including grinding up glass for use as sandblasting media. Too, we lack a way of measuring waste reduction. And finally, and most important, weight-based measurements do not calculate the *effects* of recycling.

The three-legged stool of recycling's sustainability calls for a materials recovery system that works economically, does not harm workers or consumers, and is ecologically sound.

Results of the current recycling ratemaking system

Accurate comparisons between communities, between states, between industries and between materials are impossible.

Poor numbers lead to poor planning and poor investments.

Deep and wide public confusion is generated.

Weight-based rates do not provide the information we need.

Weight-based rate comparisons do not help much in attaining sustainability. New metrics are required. If we focused on the energy savings from recycling, the findings might suggest we should boost nonferrous metal recovery. If we assessed the impact on greenhouse gas emissions from several recycling strategies, we might recommend a recovery system far different than the current one supported by a weight-based approach. By looking at employment levels, we might choose one investment over another. If we considered resource use, we might think differently about paper (made from a renewable) versus most forms of plastic (made from nonrenewable natural gas and oil). To compare programs, we might move away from a gross-tons approach and measure success by a pounds-per-household calculation.

As recycling evolves, we'll likely see a move away from a dominant reliance on recycling rates as a measurement tool. One can posit that pressure will rise for new analytics, and that the U.S. EPA may re-enter this debate. If we wish to develop and fairly employ new metrics, some experts are suggesting that the International Standards Organization or the American Society for Testing and Materials convene a multi-stakeholder, deliberative project so we develop useful and sound metrics. Let's hope. RR

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