LACK OF RECYCLING INFORMATION CREATES CONSUMER CONFUSION

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Most recycling programs treat all types of recycled materials as interchangeable, and perhaps for this reason, the general public tends to think of them this way as well. For consumers, two decisions they make can affect the amount and type of material that ends up in landfills. The first and most obvious is whether to dispose of an item in a garbage or in a recycling bin. But also important is the decision to purchase items made of different materials in the first place. For various reasons, little thought is put into making either decision. Yet consumers often lack the information needed to make optimal decisions regarding recycling.

RECYCLING TOO LITTLE, AND TOO MUCH

Recycling decisions can go wrong in different ways. First, a considerable amount of potentially recyclable material in the United States continues to end up in landfills. Overall municipal waste recycling rates in the United States were 35 percent in 2017 (versus 46 percent in Europe in 2017).

Some materials are recycled at higher rates than others. In 2017, Americans produced approximately 67 million tons of paper and paperboard waste. Of this, around 44 million tons, or roughly two-thirds, was recycled. By contrast, Americans produced over 35 million tons of plastic in 2017, less than 10 percent of which was recycled.

On the flip side, a simplistic "recycling is always better" mentality may lead people to attempt to recycle waste material that is not recyclable or that is contaminated with unrecyclable material. This not only has no environmental benefit, but it increases the costs to recycling programs, making them less likely to succeed.

Lack of information about recycling can also affect purchasing decisions. Consider a consumer at the supermarket who wants to make environmentally informed purchases. Without clear signals about the recycled value of different materials, they may be hesitant to buy certain products and may fall back on vague impressions about what types of packaging are bad.

For example, while stories about waste accumulation in oceans has gotten significant press attention, waste generation finding its way into oceans is predominantly from foreign nations. Less than 2 percent of plastic waste in the United States is mismanaged (littering, uncontained landfills, etc.), whereas in China it is 76 percent and India it is 87 percent. For most recyclable materials in the United States, the choice is between whether to dispose of it in a recycling bin (if available) and putting it in an ordinary garbage can.

The ability of different products to be recycled is thus a key piece of information consumers need to make good decisions. Some materials, such as paper or plastic, are partially degraded during the recycling process

and thus the same material can only be recycled a few times, while others, such as aluminum, can potentially be recycled forever.

SOME RECYCLED MATERIALS GENERATE MORE REVENUE

Perhaps the biggest piece of information that could help consumers has to do with the value of different materials once recycled. The market price of some recycled materials greatly exceeds that of others. In August of 2020, a ton of sorted baled aluminum cans had a value of $796.20, while baled steel cans were valued at only a 10th of the price, $79.06 a ton, and sorted residential papers could fetch only $33 a ton. Substantial price fluctuations for materials are also common. While natural HDPE (high-density polyethylene) was more than 10 times as valuable as colored HDPE in August of 2020, one year earlier the price of natural HDPE was merely twice as high as for colored HDPE (20.34 cents per pounds versus 10.08 cents per pound).

All of these variations mean that some recycled products are much more valuable than others. For example, consider the waste produced by the average single-family home. Based on a recent two-year average of prices, if all such materials were recycled, aluminum cans would represent only 3 percent of the total by weight, but would account for nearly half of the revenues generated from the recycled materials.

PEOPLE LACK INFORMATION WHEN MAKING RECYCLING DECISIONS

The differences between recycled materials are mostly hidden from end users, who therefore may not know the true importance of their recycling decisions. These differences are also ignored by most recycling programs themselves, with the result that higher profitability materials end up subsidizing less profitable ones.

Giving individuals more information could help them make better choices when it comes to recycling. Many recycling programs rely on messaging meant to evoke guilt, which can be less effective and may even backfire. People faced with a blanket "recycling helps save the planet" narrative may engage in "aspirational recycling" where they put non-recycling waste in their recycling bin, contaminating the process. Recent research suggests that modifying the frame to a transformational message that communicates what recycled waste can become can make a major difference in recycling rates.

We should also look to the information conveyed by prices. Local recycling programs struggle often financially because they use materials that are more profitable to recycle—such as aluminum—to cross-subsidize uneconomic recycling practices. But this can send confused signals to consumers and producers alike. Cross-subsidization can ultimately hamper the financial sustainability of recycling programs and blunt the incentives for maximizing the value from recycling. If there are specific environmental externalities that apply more to one type of material than another, then those should be precisely quantified and taken into account, rather than assuming that if it is recyclable then it is all the same.

CONTACT US

For more information on this subject, contact the R Street Institute, 1212 New York Ave. NW, Washington, D.C. 20005, 202-525-5717.

Josiah Neeley
Resident Senior Fellow
Energy and Environmental Policy
jneeley@rstreet.org
512-415-2012

Philip Rossetti
Senior Fellow
Energy and Environmental Policy
prossetti@rstreet.org