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Industrial Recycling

From an industrial perspective, the recycling loop is a bit more orderly. Sometimes wastes from a manufacturing process can be put right back into the process and never leaves the facility. Other times, a manufacturer can send truckloads of materials directly to the processor who then turns the material back into usable raw materials. In this scenario, the processor knows that the material is clean and high quality, and is receiving a known or steady volume; so the processor might pay the manufacturer for the material. Additionally, the manufacturer is in a better position to buy the processed material back because the quality and content of the material is known. So, although the industrial recycling loop is not considered "post-consumer," it tends to be more financial stable, and therefore more feasible.

Resource productivity, or how many times a resource can be used, is a critical part of the sustainability circle. By reusing a material over and over, we can keep it out of a landfill and also keep the unused resources in the ground (e.g., using paper pulp from waste paper products instead of cutting down trees, or using recycled aluminum instead of mining Bauxite ore).

Can I Recycle This?

When I talk about sustainability, people usually think I mean just recycling. In my opinion, recycling is the penultimate thing you should do with a material, next to putting it in the garbage can. **Here are 5 reasons why I think the recycling process in the US is broken.**

I. We just don't do it right. Sure, the plastic bag you brought home from the store says "recycle me" and has that nifty little triangle on it. But, does your disposal vendor accept plastic bags in your recycling bin? Probably not. Are you willing to bring it back to the store (clean and dry) and put it in a container so that THEY can recycle it? We throw everything into the recycle bin if we THINK it can be recycled. This is called "wish-cycling." For example, we put packaging into the recycling bin that contains grease (e.g., pizza boxes), or is a conglomerate of materials (e.g., chip bags). This behavior devalues the stuff in the bin that actually CAN be recycled, and increases the processing centers' costs.

II. Resource separation. What we do in our offices and in our homes is NOT recycling. What we are doing is resource separation. This is only the first step of the recycling process. These materials must then be collected, processed and remanufactured. We can put different wastes into different containers, but then we don't really know what happens to it when the trash vendor comes and gets it (or don't really care, for that matter). In an industrial setting, there is a bit more control, as explained in the "Industrial Recycling" sidebar.

III. Very few facilities in the US will process separated resources. Once we have separated paper, plastic, glass, and aluminum, it needs to be processed by a facility that can turn it into a usable raw material ready for remanufacture. It needs to be cleaned and shredded and melted. It needs to be turned into glass beads, or plastic pellets, or aluminum alloy sheets, or paper pulp. We have lost our ability to ship our plastic to China to be processed into reusable pellets because of our wish-cycling habits. So, we have less options to turn our separated resources into reusable materials. The US simply does not have a robust infrastructure to manage the different recycling streams.

IV. Very few companies are willing to purchase raw materials made from recycled waste. Once beads and pellets and paper pulp have been created from separated resources, a buyer must be interested in these materials and purchase them. Few companies are willing to purchase recycled raw materials for various reasons.

About the Author

Donna Switzer is the founder of Beyond Compliance LLC Consulting of the Greater Philadelphia Area, a woman-owned sustainability and environmental, health and safety (EHS) consulting firm that partners with organizations to solve environmental, social and governance (ESG) requirements. Donna is passionate about reducing risks associated with air emissions, wastewater discharges, waste management, and workplace safety. She has worked with a broad range of organizations in chemical, pharmaceutical, manufacturing, construction, and power sectors in developing, implementing, and evaluating key sustainability and EHS programs.

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The most sensical reason is that the provider may not be able to guarantee the quality or specifications for the recycled material. However, there are other reasons preventing companies from using recycled materials - like it is the wrong color - that just make no sense from an overall perspective. Do we really need white plastic bags, or white toilet paper and paper towels, or perfectly clear glass containers? If the answer is yes, then we need to examine why.

V. Consumers could care less. As a consumer, do you purposefully purchase items made from recycled materials – paper products, aluminum foil, trash bags? These items are usually more expensive, aren't they? In some cases, consumers have no idea that there is even a recycled material option. One bright spot to mention is that products labeled, "contains X% post-consumer recycled materials" are items that DO contain some materials that have been through the recycle chain described here. So, buying products that contain post-consumer recycled materials is supporting and strengthening the recycling chain.

So, what is the solution?

Firstly, let's look at the Environmental Protection Agency recycling mantra – REDUCE, REUSE, RECYCLE! This means as consumers, we should first decide if we really need that thing (ask yourself – do you need that plastic bag for the item that you just purchased). Then, if you do have an item, instead of throwing it away immediately, see if you can reuse it a few times (determine if you can use the bag for another shopping trip, or for say spent cat litter). Only if these two scenarios can't be done should you separate the waste from the garbage can and send it for recycling (continuing with the bag scenario, take it back to the place that gave it to you - Target, Kohls, the grocery store - and put it into their recycling containers for further processing).

Secondly, and most importantly, purchase goods that contain post-consumer recycled materials. Only when there is a buyer for a good will our manufacturers meet that need. You can also take it a step further and request recycled materials from your suppliers. If Unilever, for example, never hears from their customers, then they will never know that customers want packaging made from recycled materials. It follows the old adage of supply and demand. If there is a demand, then the supply chain will rise to meet the demand, and the cost will adjust accordingly.

Thirdly, pay closer attention to how you separate resources. Identify how your disposal vendor wants you to provide separated materials – do they want it in a single stream, do they want glass (because broken glass can sometimes contaminate the process), does the material need to be rinsed, are there limits on the colors or the types of plastic that they can accept, is there a local drop off center that accepts big ticket items such as electronics or scrap metal. Different disposal vendors have different processes. Getting the correct information from your vendor, and communicating that with your family, will prevent "wish-cycling."

In conclusion…

As with anything, the recycling process is driven by income and costs, by supply and demand, and by sellers and buyers. Increasing consumer demand for products made with recycled materials will increase the financial stability of the recycling process. Additionally, providing well separated resources to processors will decrease their processing costs, again increasing the financial stability of the recycling loop.

If you would like more information about how you can plan for and implement a successful sustainability program, please contact us.

Resources:

Photo by Shopify Partners from Burst
https://www.recycleacrossamerica.org/
https://www.epa.gov/americarecycles/us-recycling-system

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