Closing the Circular Economy Loop

A Call for EU Action on Recycled Content Mandates

Reloop welcomes the voluntary commitments introduced in the European Commission's Plastics Strategy to boost the uptake of recycled plastics, but we believe that without minimum recycled content legislation there is not enough incentive for product manufacturers to shift from using virgin to recycled plastic feedstock on a long term basis.

We also believe that voluntary procurement agreements can result in uncompetitive business, particularly at times when virgin resin is cheaper than recycled resin. When oil prices are low, companies not bound by content commitments can purchase cheaper virgin resin and gain a competitive edge (see case study 1).

Reloop is of the view that the legal certainty provided by recycled content mandates for packaging and products would be beneficial for all Member States, collection and sorting companies, recycled-resin producers, and producers of plastic goods or goods packaged in plastic.

Baseline minimums for businesses that procure resin for plastic products and packaging should be applied in a manner that supports Europe's single-market. Policy that levels the playing field will enable the entire value chain to capitalise on a scaled-up transformation to circularise plastics as quickly and efficiently as possible.

How we got here

For nearly two decades, the dominant market for many of the world's recycled materials was China. In 2016 alone, Chinese manufacturers and recyclers imported 7.3 million metric tons of waste plastics (valued at $3.7 billion) from developed countries, including the EU, Japan, the U.K., and the U.S. China also took in more than half of the world's exports of waste paper.

The demand for large quantities of material with little concern for quality (because low cost Chinese labour could sort it to specification) spurred a massive growth of municipal recycling programs in both Europe and North America. These programs collected a wide range of materials, including plastics Nos. 3-7, or "all plastics." Materials recovery facilities increased in number, as did their average annual throughput capacities. Business was booming and the circular economy was moving along nicely, with much of the actual recycling happening in the world's most populous country.

However, China's recently announced ban on imports of 24 categories of recyclables and solid waste will change all of that. The import ban applies to several plastic resins (including PET, PE, PVC, PS and "other" plastics), textiles, unsorted mixed paper, and other materials.

In place since January 1, 2018, the Chinese ban has already dramatically affected commodity prices and has resulted in shifts in municipal recycling contracts and material acceptance. There are reports from all over Europe and North America that recycling programs are stuck with sorted material with nowhere to go, except landfill or energy from waste.

Unlike the worldwide economic downturn of 2008, which saw Chinese demand bounce back within a year, China's recent decision is likely to have long-term impacts on the recycling industry, requiring fundamental change in the way we do things. If the demand for sorted recyclables is significantly reduced from the status quo, the future of existing collection and sorting facilities is at risk, which threatens a massive slowdown of the circular economy. In order to make up for this reduced demand, the EU needs to create a new market for its waste plastics and that market can only be established for quality materials.

Market dynamics of recycled resin

Demand for recyclables is driven by raw material procurement decisions made by product and packaging suppliers and their customers. In the vast majority of cases, the key variable that determines the amount of secondary material used in production (besides quality, of course) is price. When energy costs are moderate to high, secondary materials are attractive to producers since the move allows them to benefit from a slightly lower price. This is especially true with plastics because petroleum use is an important part of most virgin plastic production.

Going the recycled route also allows producers to meet corporate social responsibility goals, including greenhouse gas reduction targets, since using recycled material avoids all the emissions associated with virgin material extraction.

On the other hand, when the price of energy or raw materials is low, the attractiveness of secondary material inputs diminishes, and businesses will choose virgin.

It is for this reason that voluntary initiatives among product manufacturers, although laudable and very important, cannot be the sole path to push greater use of recycled materials. Consider the following case studies to help illustrate this dynamic.

Case Study 1: Closed Loop Recycling

U.K.-based plastic processor Closed Loop Recycling announced in 2013 that it would be expanding its high-density polyethylene (HDPE) recycling infrastructure to meet growing demand after major retailers and processors voluntarily supported a commitment of using nearly 30% recycled content in HDPE milk containers (http://www.wrap.org.uk/content/hdpe-plastic-bottles) (increasing to 50% by 2020).

But by spring of 2015, after the price of virgin material dropped below the price of recycled resin, Closed Loop Recycling could not compete with its virgin competitors and the recycled content commitments from the dairy industry were dropped. "Our customers want to buy recycled plastic but they don't want to pay more [than virgin plastic]," Chris Dow, chief executive of Closed Loop, said at the time. "Without the support of the industry or the government it is inevitable we will go into administration."

This case study goes to show that when it comes to the bottom line, voluntary agreements are usually the first thing to go. The EU cannot rely on voluntary procurement agreements to promote consistent long-term demand.

Case Study 2: Coca-Cola

Coca-Cola has made several promises over the years to increase recycled content in their PET bottles. In 2009 the company targeted a goal of 25% recycled content by 2015[1]. Just two years later the goal was adjusted to 25% **recycled or renewable** content by 2015[2].

The most recent figures available, from 2015[3], claim a 12.4% recycled or renewable content, which includes plant bottle material. Seven percent of the PET the company uses for bottles globally is made from rPET[4].

The 2014/2015 Sustainability report lists some of the challenges the company has faced in its efforts to increase rPET content. These include low supply/high demand, crude oil price collapse in 2014 and regulatory restrictions[6].

[1] Coca Cola Company 2008/2009 Sustainability Review. Page 26. "Packaging Targets"
[2] Coca Cola Company 2010-2011 Sustainability Report. Page 33 "INCREASING OUR USE OF RECYCLED AND RENEWABLE MATERIALS"
[3] Coca Cola Company 2014/2015 Sustainability Report. Page 38. "Recycled and Renewable PET"
[4] https://www.greenpeace.org.uk/coca-cola-released-global-plastics-plan-pass-test/
[6] Coca Cola Company 2014/2015 Sustainability Report. Page 39 "Recycled PE

Mandated Recycled Content (MRC)

Recycled content laws are not without precedent. Such mandates, which require that a certain percentage of recycled material be included in certain new products and packaging, have been enacted in two U.S. states. Last year California mandated recycled content for beverage containers. Similar mandates for plastic film used for trash bags and rigid non-food containers have been in place since the 1990s.

The revision of the EU's Packaging and Packaging Waste Directive; Construction Products regulation; and End-of-life Vehicles Directive presents a golden opportunity for stakeholders to stimulate increased investment in domestic recycling infrastructure by providing assurance to sorters and recyclers that government is committed to promoting recycling, improving quality and efficiency, and increasing capacity.

MRC also offers an opportunity for national governments to promote innovation and creativity in product design. In the past, the quality and performance of some recycled-content products did not always measure up to those made from virgin materials, but technology has come a long way and it is now possible to manufacture high-value and high-quality recycled products that meet or even exceed the performance of virgin products.

Perhaps more importantly, introducing minimum recycled content requirements for selected products and packaging will help to ensure the continued movement of recyclables and provide an economic incentive to increase collection, irrespective of markets evaporating in China or anywhere else. This would make countries more resilient to market fluctuations that national governments cannot control, allowing them to grow economies more sustainably. It would also prevent the loss of tens of thousands of jobs and the closure of sorting facilities throughout the U.S., the EU and elsewhere.

If the increasingly globalized world is to realise a truly circular economy, end markets must be available for the recycled materials that the recycling and reprocessing sector produce. We can set ever-higher recycling targets, but our recovery efforts will be stymied if no market can be found for the material that's collected.

Reloop's recommendations to EU policy-makers:

- ✓ **We recommend setting minimum requirements which escalate over time, to increase the use of recycled content in plastic products and packaging. Utilisation of recycled resin instead of virgin resin has a significant impact on energy and pollution reduction. It exponentially reduces climate emissions and improves resource efficiency, while at the same time carving out a future role for European enterprises and turning the recent China ban to our advantage.**

- ✓ **We recommend that the European Commission review and consider new and innovative approaches to setting recycled content minimums that create a level playing field for corporations, but at the same time offer them flexibility with the opportunity to opt-in or out using economic incentives and penalties.**