



Understanding Recycled Content

(and why requiring minimum levels is not the answer for paper packaging)

1. **Recycled content is usually expressed as an average.** This could be an average of a mill's particular production run (so each customer can label the recycled content of its packaging) or an average over a much longer period of time (normally 12 months) for mill or industry averages. PPEC asks all Canadian-based packaging mills for recycling data every two years. National average recycled content percentages are then determined by dividing the number of tonnes shipped by the number of tonnes of recycled paper or board used in those shipments. For example, in 2010, of the 1.76 million tonnes of packaging material shipped domestically in Canada some 1.36 million tonnes comprised recycled paper or board (giving an average recycled content of 77%).
2. **There are actually two types of recycled content: pre-consumer and post-consumer (both recognized by the International Standards Organisation (ISO) and by Canada's "Guidelines" for environmental labelling.**¹ PPEC does not distinguish between the two in its survey because both divert used paper material for further recycling. "Pre-consumer" recycled content includes corrugated clippings or boxboard trim that is left over from the process of converting board from a mill into a converted product (a box, bag, or carton) and then sent back to a mill for recycling, while "post-consumer" material is a converted package that is sent for recycling after use by industrial, commercial, institutional or residential users.

Some people have the impression that "post-consumer" material is somehow environmentally superior to "pre-consumer" material. PPEC (and ISO) do not support this supposition. The amount of trim or cuttings (pre-consumer material) at a box plant, for example, is actually relatively small because maximizing the use of the whole board that has already been paid for is in the best interests of the plant and/or its customer. The next customer will get some of this trim in the next piece of board purchased, and so on in a continuous recycling loop, so the brandowner/retailer should get credit for recycling this, in our view.

There is a further argument for including some recognition of this off-site trim or cuttings. And that is that, generally speaking, a mill needs an extra 10 tonnes of used paper or board to produce 100 tonnes of recycled product shipped out the door. This is because paper fibres shrink in the pulping process. Even though a mill has paid a municipality or a broker for 110 tonnes, and technically repulped 110 tonnes, it makes no claim for recycling more than 100 tonnes for recycled content

¹ Environmental Claims: A guide for industry and advertisers (Competition Bureau, Canadian Standards Association)

purposes. It does not seem unreasonable in this light, to claim trim and cuttings as some sort of trade-off for the shrinkage that is not claimed.

3. **Average recycled content varies between packaging grades.** The average recycled content of paper packaging shipped domestically by Canadian mills noted above (77%) is, in fact, a *combined* average, including all three main packaging grades: containerboard, boxboard (called paperboard in the US), and kraft paper packaging. But each of these grades also has its own average, depending largely on its particular packaging function.

For example, *kraft paper* is predominantly used to make multi-wall bags and grocery sacks. For this you need strong paper fibres (kraft is the German word for strong). Virgin fibres are stronger than recycled fibres so it is not surprising that kraft paper in Canada is mostly made from virgin material, plus wood chips, shavings and sawdust left over from logging operations. The average recycled content of kraft paper packaging shipped domestically is currently 17 per cent. Paper bags collected from household Blue Box-type systems are normally recycled into new corrugated boxes rather than separated out and shipped back thousands of kilometres to the nearest kraft paper mill for recycling.

Boxboard shipped by Canadian producers throughout Canada, on the other hand, is mostly 100% recycled content when it leaves the mill (made as it is from a mixture of old corrugated boxes, old newspapers, used printing and writing paper and old boxboard itself, the residential collection of which PPEC pioneered back in the earlier 1990s). There are 10 mill sites in Canada producing boxboard grades; seven of them using 100% recycled content. Two mill sites use a blend of recycled and virgin, and one uses 100% virgin fibre. Overall, the average recycled content for domestic shipments of boxboard is now 77 per cent.

Containerboard shipped domestically is also mostly 100% recycled content. Of the 13 containerboard mill sites in the country, eight produce 100% recycled content, and the balance a blend of recycled and virgin for an overall industry average of 82% recycled content.

4. **When governments or customers require minimum recycled content in their packaging materials, they generally advance the following two arguments: (i) that by using “recycled,” less virgin materials will be consumed and (ii) that using recycled will grow or encourage markets for recycled materials. There is also sometimes an underlying assumption that using recycled is always “environmentally superior” to using virgin.**

As far as argument (i) goes, it is certainly true that by using “recycled,” less virgin material will be consumed. In the paper industry, however, this fact comes with some caveats. The industry cannot exist without virgin fibre. It needs longer virgin material to replenish the shorter and thinner paper fibres that gradually wear out as a result of repeated recycling. In other words, to keep the whole recycling loop going (and to produce recycled content in the first place) we have to have trees (virgins) somewhere in the system on a regular basis.

Allowing the global forces of supply and demand for paper fibre to determine this issue (while at the same time pushing for all forests to be third-party certified for sustainability) is a far better approach, in our view, than for governments or individual companies to act in isolation and to set unscientific and competing “minimums” that may suit their perceived (and usually narrow) needs.

The real goal, surely, is achieving a global and sustainable balance in the use of the world’s forest resources; allowing countries that no longer have sustainable forests of their own to import virgin material from those countries that do have sustainable forests, and that can supply the necessary virgin material to keep the whole global paper life cycle going.

For example, as noted earlier, production of kraft paper packaging in Canada uses mostly virgin material because it needs strong fibres to perform its packaging function. Setting some minimum level of recycled content for kraft paper multiwall or grocery sacks in Canada would threaten the closure of two of the three mills that produce this grade, and the loss of their significant export markets.

There is also the question of who decides what a minimum recycled content level should be. The nightmare scenario for the industry is widely divergent thresholds that bear no relation to the issues of global supply and demand, and a tendency (driven more by politics and public relations than anything else) to leapfrog over someone else’s number.

We would argue, in fact, that there is no need for minimum recycled content levels for corrugated and boxboard produced by Canadian mills for use in Canada. High recycled content numbers have already been achieved through market forces. Seven of the 10 sites producing boxboard in Canada, for example, already use 100% recycled content, with another two using a blend of recycled and virgin. So there would seem to be little advantage in demanding an industry average above its current 77 per cent. All a minimum level would do is effectively target the one virgin mill.

As for containerboard, domestic shipments are already at an 82% industry average. Eight of the 13 mill sites are already at 100% recycled content and there are no longer any 100% virgin containerboard mills in the country. Setting a minimum level of recycled content for containerboard in these circumstances does not seem to make a lot of sense.

And then there are imports of packaging board and converted boxes, bags and cartons. Almost half of the paper packaging that Canadians use is imported, either as raw material or as converted product. Any minimum recycled content levels would have to apply equally to imports to meet fair trade rules and various treaty obligations.

The second argument often advanced for setting minimum recycled content levels is that such “green procurement” grows or encourages markets for recycled materials. This is demonstrably untrue for used paper packaging in Canada.

The markets for old corrugated and boxboard are now very mature. Over 80% of Canadians have access to the recycling of these materials and a recent PPEC survey indicated an actual residential capture rate of 65%, over and above what we estimate to be an 85% industrial capture rate. The fact of the matter is that Canadian mills cannot get enough used paper and board in Canada itself and have to import almost a million tonnes per year from the United States to ensure they can make the new recycled content paper products and packaging that their customers require. Setting higher recycled content levels than the Canadian marketplace can supply, will simply mean that mills will *import* more used paper and board to meet that demand. Capture in Canada itself is unlikely to increase.

Higher charges for landfilling used materials, and landfill bans on recyclable materials such as paper, would certainly help to recover more paper material in Canada. Introducing unnecessary and non-scientific rules for recycled content, on the other hand, amounts to misguided public relations and does absolutely nothing to increase paper capture rates (the single largest supply issue the industry faces and why it continues to rely on imports of used paper and board for its survival).

Nor is recycled content necessarily “environmentally better.” The COMPASS software tool used by environmental advocate GreenBlue and the Sustainable Packaging Coalition (SPC) shows that 100% recycled content has greater global warming potential (GWP) than virgin corrugated board (even when using European data). This is primarily due to differences in mills’ *energy* sources (biomass versus fossil fuels). It is unclear, therefore, how setting a threshold of recycled content would actually improve overall environmental impact.

For these various reasons, then, the industry opposes the setting of minimum levels of recycled content on paper packaging. We’ve already achieved very high levels.