



MASTER BREWERS ASSOCIATION OF THE AMERICAS

Beer in PET: The Answer to Beer Packaging Headaches

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Abstract

Consumers want more Beer styles, flavors and experiences than ever before. The brewing industry is more Dynamic and competitive than ever.

Yet, the Packaging used for our products is just "Reduced and Reused" versions of what has been used for decades. Utilizing a scaleable self-manufacture approach to your packaging requirements could be a game-changer for profitability and flexibility. PET bottles for single and multi-serve beer packaging will unlock an influx of technology and control.

•The production facility doesn't have to stock warehouses full of empty containers. This creates a nearly on-demand yet comparatively flexible production stream plus no shipping of your packages filled with air.

•Your bottle can be easily changed to freshen up the marketing or customize the image. Marketing is a huge part of the Beer industry and PET can make the difference.

•With PET the Carbon footprint of each beer is lowered by reducing the energy emissions and solid waste streams needed to produce and recycle the package.
(Compared to Glass and Aluminum)
Not to mention huge savings in shipping compared to Glass due to the significant reduction in weight.

•In regards specifically to multi-serve and keg systems, the potential of switching to PET has been largely discussed recently and the benefits not yet fully realized. A new market is approaching and you can steer it and benefit from it or let it happen to you.

The Headaches of Beer

Increasing Industry Competition

Shrinking market on the whole makes for more desperate and aggressive competition.
"Overall U.S. beer sales were down an estimated -1.9% by volume in 2013"

Peer Competition and Stratification - i.e. Lagunitas Brewing v. Boston Beer Co "West Coast Style IPA" Twitter fight

New and existing restrictive legislation (i.e. growler size limits in FL)



Distribution control



Dated Packaging sub-straights Beer Cans

"1935 (January) the first beer cans filled with Krueger's Beer are sold in Richmond, VA" –
"1959 (October): Coors starts using 7 ounce all aluminum cans."

The Beer can is old enough to highlight that it is becoming a 'stale' packaging sub-straight but it is a new enough addition that it is clearly not a major historical component of the experience of beer.

Beer Bottles

Beer first packaged in glass beginning in the late 1500's. US 1992 - 12oz longneck bottle Agreement
1969 - Bottled beer first outpaced by cans

The Beer bottle may have some claim to the history of Beer, though the technology is clearly as Limited as it is old.

Clearly it is a 2-horse packaging race at the moment but a Future growth trend for these packages is not so clear
–BPA (Children's cup ban July 2012 => AL can lining...)
–Trends are volatile and do not show the Growth that many trending articles highlight

High "True" Costs,

Supplier costs may be known but Cost-to-door, warehousing, handling, scrap, cleaning/rinsing, re-inspection, Shipping load pack-out, etc,

High Carbon footprint

Extra carbon producing processes, Additional resource requirements (Water, Air Heat/Cool, Wastes)

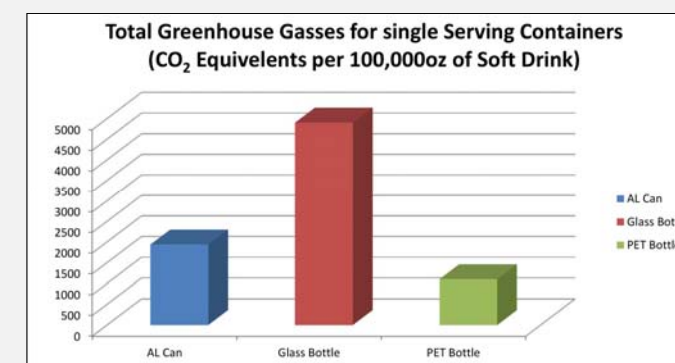


Chart 1. Greenhouse Emissions by Package Type

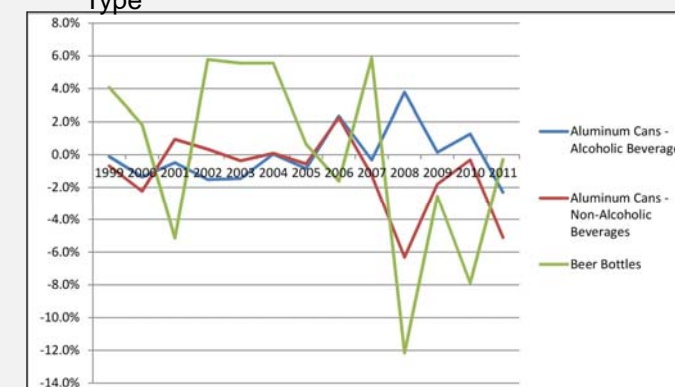


Chart 2. Growth by Package Type

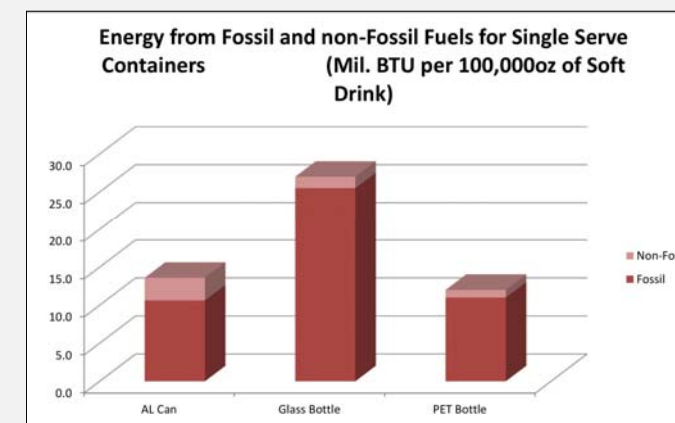


Chart 3. Energy Consumption by Package Type

Headache Remedy

Current, Present and Future solutions for growth and profitability within the Beer industry as a whole. "How are these headaches addressed?"

•Introduce new highly marketed products in order to stimulate growth gain percentage of the dwindling market.

•Piggyback on existing growth Styles, Brands, Labels and Profitable Segments again to win sales through confusion and hidden connections

•Integrate New package styles (i.e. Aluminum bottle, PET bottle, In-home PET Keg systems, etc.). Stimulate Market growth through new applications, creating new markets and creating "buzz".

•Apply new technology and vertically integrate to reduce the cost per package
e.g. Kronos Blow-Fill "Contiform Block"

•Kronos has the products and services to bring the Most Profitable solution to your brewery. Fast or slow. Flexible or optimized. Kronos Has the Packaging solution to make the difference

The Packaging solution for the headaches of Beer is here in front of us.

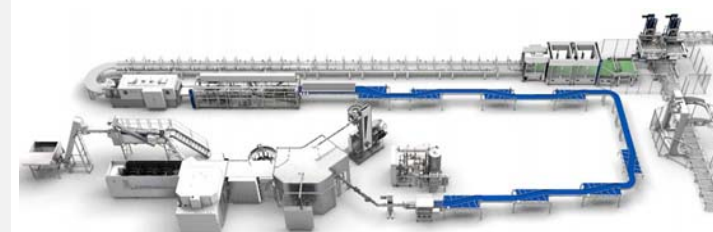


Figure 1. "Blocked" Production Lines.



Figure 2. Package Customization



Figure 3. Package Design Flexibility

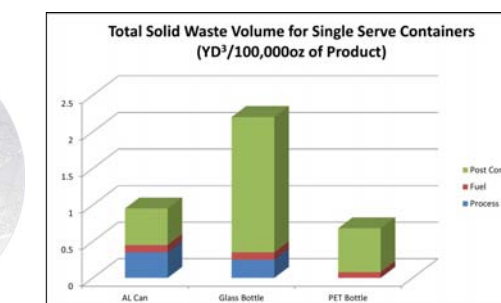


Chart 4. Solid Waste by Package Type

• Apart from the carbon cost, and environmental benefits PET has a number of significant additional advantages over Glass bottles and Aluminum Cans or Kegs
– More easily and cost effectively able to Customize the package by brand or marketing campaign

– Less energy needed to Make, Deliver and Recycle PET packaging => Smaller Carbon footprint
Will open markets by extending shipping reach and creating new ways to integrate the product into the customers lives

e.g. maintenance free, CO₂-less Keg system

– Less Solid Waste in Total Life Cycle

• Equipment focused on bringing the technology seamlessly and easily to your facility for Optimum Efficiency
– PET offers the greatest level of vertical integration and consequentially the greatest potential production cost savings

– Digitally controlled, Recipe driven, data-rich optimization



Conclusions

Firstly and primarily, the bottle must protect the quality of the product. A PET beer package is up to the task and is already widely accepted in many parts of the world. With proper bottle material, closure selection, color and barrier, a PET bottle meets or exceeds the all of the protection needs for your product.

In addition to meeting the prerequisites, PET Packaging for beer brings a number of significant and highly valuable benefits which are not reasonably available for other sub-straights. PET is more customizable, allowing your bottle to stand out with texture, decoration, embossments and shape easily changeable and essentially on demand per your production schedule. PET is independently verified as "greener" through the complete lifecycle of the package with: 75% less Greenhouse Gas emission than Glass and 28% less than AL. 52% less Energy use than Glass and 4% less than AL. PET packaging reduces Solid Waste by 60% compared to Glass and 20% compared to AL.

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