



U N I C A L

RECYCLED
GLASS
MARKETS



The markets can be divided in four segments:

- 1) cullet for the container industry
- 2) fine grinded cullet for the fibreglass insulation industry
- 3) specialty products such as glass abrasives, glass powders and fillers
- 4) low value applications such as landfill cover and road base aggregates

MARKET FOR THE GLASS CONTAINER INDUSTRY

- natural market for glass collected through deposit systems
- for glass coming out of the blue box programs; high volume of glass is needed to justify capital investments for a processing line
- markets must be analysed on a regional basis
- the importance of understanding the economics of the cullet for the container industry

ECONOMICS OF THE CULLET FOR THE GLASS CONTAINER INDUSTRY

- the price a glass container manufacturer will pay is limited to the cost of its virgin batch cost plus the benefits of using recycled glass. Those benefits are:
 - reduction in energy costs since the recycled glass is melting at a lower temperature
 - no fusion losses
 - higher throughput
 - longer furnace life
 - reduction in emissions

- the virgin batch cost in north America ranges from 50\$ to 70\$ per ton
- the price for glass cullet will then vary from 70\$ to 120\$ per ton
- the freight to destination is the most important issue
- with the closing of the OI Scoudouc plant, the markets are basically out of reach. The closest glass container plants are in Montreal and Boston.
- the export market is a possibility in specific areas. However this is a tricky market with logistic issues. The maritime freight can also be a limiting factor.

MARKETS FOR THE FIBREGLASS INSULATION INDUSTRY

- this is also a good market for the glass collected through deposit systems
- this product involves additional processing and additional costs
- the market for the glass container industry is a regional market
- the locations of the closest fibreglass plants are even farther than the container plants
- the economics of the fibreglass cullet are identical to the glass container cullet

SPECIALTY PRODUCTS

- interesting markets but limited in terms of volumes
- needs also significant capital investments
- would only be a solution for a fraction of the glass generated in the Atlantic Provinces
- doubtful that the potential markets would justify the capital investments

LOW VALUE APPLICATIONS

- we should say no or negative value applications
- typically a charge is levied for landfill application and road base aggregates are given away. A substantial tipping fee is therefore needed to cover the processing and freight costs.
- those applications have no environmental benefits when compared to the glass cullet for the container and fibreglass industries
- it might be a solution for very remote locations where the freight to markets are very high

Conclusion

- markets for cullet for the container and fibreglass industries in North America are too far away
- markets for specialty products are not sufficient for the glass generated in the Atlantic Provinces
- low value applications are not a solution
- the possible viable alternative could be a local cullet plant for export markets