



**Best Practices in Glass Recycling**

**Glass Processing Cost Spreadsheet**

**Material: Recycled Glass**

**Issue:** This Best Practice contains economic modeling spreadsheets described in the Small-Scale Glass Processing Costs Best Practice.

Economic Evaluation - Recycled Glass Processing System			
Operating Parameters			
<b>Operating Parameters</b>			
Hours of operation, h	estimate hrs/yr	<input style="width: 80px; height: 20px;" type="text"/>	hrs/yr
Available feedstock	estimate tons/yr	<input style="width: 80px; height: 20px;" type="text"/>	tpy
Debris content, d1	estimate % debris	<input style="width: 80px; height: 20px;" type="text"/>	
System capacity, Q	estimate tons/hr	<input style="width: 80px; height: 20px;" type="text"/>	tph
Production efficiency, f	estimate %	<input style="width: 80px; height: 20px;" type="text"/>	
Dust Generation, d2	estimate %	<input style="width: 80px; height: 20px;" type="text"/>	
System power use, e	estimate power rating	<input style="width: 80px; height: 20px;" type="text"/>	kW
Gas consumption, g	estimate btu/hr	<input style="width: 80px; height: 20px;" type="text"/>	btu/hr
Production, P	$(Q \times f) \times (1 - d1 - d2) \times h$	<input style="width: 80px; height: 20px;" type="text"/>	tpy
<b>Utilities</b>			
Electricity	enter cost per kWh	<input style="width: 80px; height: 20px;" type="text"/>	per kWh
Gas	enter unit cost	<input style="width: 80px; height: 20px;" type="text"/>	per btu
<i>Note: Adjust values for Q and h until the volume of production = available feedstock</i>			

**Best Practice:** The spreadsheet below develops the operating parameters for the spreadsheet on the next page. For a detailed explanation, see the *Small-Scale Glass Processing Costs* Best Practice

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Line item production costs for a typical small-scale operation are shown below:

<b>Economic Evaluation - Recycled Glass Processing System</b>			
<b>Cost / Revenue Analysis</b>			
<b>Product Sales</b>			
Product	enter price per ton	<input type="text"/>	/ton
Bag / pallet charge	enter cost per ton	<input type="text"/>	/ton
<b>Total Revenue, TR</b>	total per ton x P	<input type="text"/> rev/ton x P /yr	<input type="text"/> net revenue /ton
<b>Variable Costs</b>			
Managerial		<input type="text"/> /mo	<input type="text"/> /ton
Sales & Admin		<input type="text"/> /mo	<input type="text"/> /ton
Operator	estimate salary + benefits	<input type="text"/> /hr	<input type="text"/> /ton
Gasoline, oil, lube	bobcat, forklift	<input type="text"/> /mo	<input type="text"/> /ton
Materials / supplies	bags, pallets, etc.	<input type="text"/> /mo	<input type="text"/> /ton
Maintenance materials		<input type="text"/> /mo	<input type="text"/> /ton
Electricity	e x cost per kWh x h	<input type="text"/> /yr	<input type="text"/> /ton
Gas	g x cost per btu x h	<input type="text"/> /yr	<input type="text"/> /ton
Mobile equipment rental	bobcat, forklift	<input type="text"/> /mo	<input type="text"/> /ton
Debris removal	enter cost per ton	<input type="text"/> /ton	<input type="text"/> /ton
Dust Control	enter cost per ton	<input type="text"/> /ton	<input type="text"/> /ton
Cost of glass delivery	enter cost per ton	<input type="text"/> /ton	<input type="text"/> /ton
<b>Total Variable Cost, VC</b>		<input type="text"/> /yr	<input type="text"/> /ton
<b>Fixed Costs</b>			
Building Lease, L		<input type="text"/> /mo	<input type="text"/>
Equipment, EC	(total equip needs)	<input type="text"/>	<input type="text"/>
Amortized Life, n		<input type="text"/> yrs	<input type="text"/>
Assumed Interest Rate, i		<input type="text"/>	<input type="text"/>
Amortized Cost of Equip, AC		<input type="text"/> /yr	<input type="text"/>
<b>Total Fixed Cost, FC</b>	AC + L	<input type="text"/> /yr	<input type="text"/> /ton
<b>Total Costs</b>			
Total Cost, TC	VC + FC	<input type="text"/> /ton	<input type="text"/> /ton
<b>Net Margin</b>			
Net Margin	TR - TC	<input type="text"/> /ton	<input type="text"/> /ton

**Application Sites** Glass processing facilities

**Contact:** For more information about this Best Practice, contact CWC, (206) 443-7746, e-mail info@cw.org.

**References:**

*Small Scale Recycled Glass-to-Fines Processing System*, Rpt GL-96-3, Clean Washington Center, 1996.

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