



Rigid Plastic Packaging Container Regulations

Economic and Fiscal Impact Analysis

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Economic Impact Analysis

OAL Regulations Require Assessment of Cost Impacts (Form 399) on:

- Regulated Manufacturers.
 - Typical Manufacturers;
 - Small Manufacturers.
- Users of RPPC Products.
 - Businesses and Residents (Individuals).
- State and Local Governments.

Economic Impact Analysis

Must Address:

- Initial Costs.
- On-Going Annual Costs.
- Total Statewide Costs.
- Lifetime of Regulation.
- Cost of Alternatives Considered.
- Value of Benefits.

Initial Economic Impact Analysis

2008 Manufacturer and Processor Survey:

- ❑ Sent to about 1,500 Container and Product Manufacturers, Material Processors, Brokers, and Other Stakeholders.
- ❑ 95 Total Responses.
 - ❑ 85 Manufacturers;
 - ❑ 10 Processors.
- ❑ CalEPA Review Panel said that the results may not be statistically representative.

Total Cost of All Regulatory Amendments

672.7 Million Impacted Containers

Cost to All Product Manufacturers (Year)	Cost to California Product Manufacturers (Year)	Cost for All California Users of RPPCs (Year)	Cost Per Impacted Container (Cents)	Cost Per All Regulated Containers (Cents)
\$1,733,000	\$433,000	\$3,491,000	0.52	0.09

Cost to 38.3 million CA Residents: 9 cents/year

Cost of Not Excluding Buckets, Tubs, Pails, Clamshells, etc. from RPPC Definition

357.2 Million Impacted Containers

Cost to All Product Manufacturers (Year)	Cost to California Manufacturers (Year)	Cost for All California Users of RPPCs (Year)	Cost Per Impacted Container (Cents)	Cost Per All Regulated Containers (Cents)
\$1,210,000	\$303,000	\$2,381,000	0.67	0.06

Cost to 38.3 million CA Residents: 6 cents/yr

Costs of Not Substituting Post-Industrial Material for Postconsumer Material

118.3 Million Impacted Containers

Cost to All Product Manufacturers (Year)	Cost to California Manufacturers (Year)	Cost for All California Users of RPPCs (Year)	Cost Per Impacted Container (Cents)	Cost Per All Regulated Containers (Cents)
\$698,000	\$175,000	\$1,485,000	1.26	0.04

Cost to 38.3 million CA Residents: 4 cents/yr

Cost of Not Switching Resin Types to Achieve Source Reduction Compliance

78.9 Million Impacted Containers

Cost to All Product Manufacturers (Year)	Cost to California Manufacturers (Year)	Cost for All California Users of RPPCs (Year)	Cost Per Impacted Container (Cents)	Cost Per All Regulated Containers (Cents)
\$348,000	\$87,000	\$739,000	0.94	0.02

Cost to 38.3 million CA Residents: 2 cents/yr

Cost of Compliance through Use of California PCM in Other Products

118.3 Million Impacted Containers

Cost to All Product Manufacturers (Year)	Cost to California Manufacturers (Year)	Cost for All California Users of RPPCs (Year)	Cost Per Impacted Container (cents)	Cost Per All Regulated Containers (cents)
\$524,000	\$131,000	\$1,114,000	0.94	0.03

Cost to 38.3 million CA Residents: 3 cents/year

STEP 1a-- Weight of Non-CRV RPPCs Used

1a: RPPC Used Annually in California
= RPPCs Disposed + RPPCs Recycled

Disposed:

2004 Waste Characterization Study

- ❑ Weight of RPPCs by Resin Type, 10 Container Styles;
- ❑ PET (#1), Bottles, Clamshells, Other Containers;
- ❑ HDPE (#2), Natural, Colored, Other and Buckets;
- ❑ #3-#7 Containers Bottles, Clamshells, Other Containers;
- ❑ CRV and Non-CRV;
- ❑ Commercial and Residential Users.

STEP 1a--Weight of Non-CRV RPPCs Used

RPPCs Recycled:

- CIWMB Recycling Rates
 - All-Container Rate (24.9%*)
 - PET Rates (35.2%*)
 - DOR CRV Recycling Data (42.5%)
- * The rates reflect the revised definition of RPPCs.

Step 1a: Weight of of Non-CRV RPPCs

RPPCs by Container Resin Types and Products

Container Resin Type	RPPCs Disposed (Millions of Pounds)	Recycling Rate (%)	RPPCs Recycled (Millions of Pounds)	RPPCs Used (Millions of Pounds)
PET (#1)	272.6	35.2	95.9	368.5
HDPE (#2)	309.6	23.5	72.7	382.2
#3--#7	103.3	3.3	3.5	106.8
All RPPCs	701.6	24.9	174.7	876.2

STEP 1b--Number of Non-CRV RPPCs Used

RPPC Certification Data

- Average Container Weight (grams)
- Exempt Product Containers

Step 1b: Number of Non-CRV RPPCs Used

RPPCs by Container Resin Types and Products

Container Resin Type	All RPPCs Used (Millions)	Exempt Products Containers (Millions)	Regulated Products Containers (Millions)
(PET, #1)	3,700	1,797	1,903
(HDPE, #2)	2,402	925	1,477
#3-#7*	1,131	567	564
Totals	7,233	3,289	3,944

Economic Impact Analysis

Analysis Approach For Regulatory Changes

- ❑ Step 1: Calculation of the Weight and Number of Impacted Containers
- ❑ Step 2: Used Postconsumer Material Content Compliance Method
- ❑ Amount of Postconsumer Material Needed and the added cost for impacted containers to meet the 25 percent standard

Economic Impact Analysis

- ❑ Assumed container manufacturer cost was fully passed to product manufacturer
- ❑ RPPC products are consumed by businesses (about 40 percent) and residents (60 percent)

CIWMB Product Manufacturer Certifications

- ❑ Amount of regulated and exempt products/containers
- ❑ Average container weights
- ❑ Percentage of California-based manufacturers
- ❑ Percentage of small business manufacturers
- ❑ Percentage of regulated containers by compliance options

Cost Impacts Information Sources

- ❑ American Chemistry Council Resin Production and Sales Data
- ❑ U.S. Census Data
- ❑ U.S. Dept of Commerce Data
- ❑ DOF Population Data
- ❑ Virgin and Recycled Resin Prices
- ❑ Plastic News, Plastic Technology and IDES.com
- ❑ Conversations with Survey Respondents

STEP 2-COST OF IMPACTED CONTAINERS

	Weight of Regulated Containers (Millions of Pounds)	Number of Regulated Containers (Millions)	Postconsumer Material Needed (Millions of Pounds)	Price Difference Between Virgin and Postconsumer (\$)
Clamshells	29.3	335.6	4.4	\$0.10
Buckets, Tubs, Pails, Etc	47.6	21.6	7.1	\$0.10
All Impacted RPPCs	76.9	357.2	11.5	\$0.10

STEP 2a—CALCULATION OF PRODUCT MANUFACTURER COST

	Total Product Manufacturer Cost (Thousands of Dollars)	California Product Manufacturer Cost (Thousands of Dollars)
Clamshells	\$462	\$115
Buckets, Tubs, Pails, Etc	\$749	\$187
All Impacted RPPCs	\$1,211	\$303

Step 2b: Calculation of RPPC User Costs

Methodology:

- ❑ Manufacturer Costs Multiplied by “Mark-Up” Factors to Calculate User Costs.
- ❑ RPPC Products are Consumed by Businesses (about 40 percent) and Residents (60 percent).
- ❑ Individual California Resident Cost:
 - ❑ Total Statewide Cost Divided by Population.
- ❑ All Regulated RPPC Cost Impact:
 - ❑ Total Cost Divided by 3.94 Billion Regulated RPPCs.

STEP 2b—COST IMPACTS ON RPPC USERS

	Total Product Manufacturer Cost (Thousands of Dollars)	“Mark-Up” Factors	Total Statewide Cost to RPPC “End-Users” (Thousands of Dollars)	
			Commercial	Residential
Clamshells	\$462	50% Commercial 125% Residential	\$334	\$597
Buckets, Tubs, Pails, Etc.	\$749		\$635	\$815
RPPC Total	\$1,211		\$969	\$1,402

STEP 2b—COST IMPACTS ON RPPC USERS

	Cost Impact Per Impacted Container (Cents)	Cost Impact on All Regulated Containers (Cents)	Cost Impact on Average Resident (Cents/Year)
Clamshells	0.28	0.02	0.02
Buckets, Tubs, Pails, Etc.	6.71	0.04	0.04
RPPC Total	0.67	0.06	0.06

Lifetime of Cost Impacts

- ❑ Cost Impacts for 5 Years.
- ❑ The Proposed Amendments Do Not Require New Equipment to Comply.
- ❑ The Majority of Survey Respondents Stated that No New Capital Equipment Would Be Necessary
- ❑ The Equipment That Might be Needed are Jigs, Dies and Molds which have an Asset Life of 3.5 Years (IRS Class #30.21)

Small and Typical Manufacturer Costs

- ❑ Product Manufacturer Certification Data for Amount and Size of Impacted Containers.
- ❑ Used Cost Methodology for each Amendment to Calculate Impacts for Manufacturers and Users.

Economic Impact Analysis

Cost Impacts on Small and Typical California-Based Product Manufacturers

	Number of Manufacturers	Number of Containers (Thousands)	RPPC Compliance Cost (\$/Year)
Small	18	362	\$ 196
Typical	232	2,459	\$1,749

Economic Impact Analysis

Summary of Product and Container Manufacturer Survey Responses

Type of Manufacturer	Number of Manufacturers Responding	No Operating Cost Impact	No Capital Cost Impact	Average Container Cost Increase (cents)
All	30	11	18	3.3
California	8	3	7	3.3
Small	4	2	4	0.75

Summary of Estimated Statewide Benefits and Costs from Amended Regulations

Reduced Disposal (\$/Year)	Greenhouse Gas Reduction: Carbon Equivalents (Tons)	Reduced Litter Clean-up	Total 5-Year Benefits
\$486,000	4,350	N/A	\$2,430,000

Alternatives Considered

- ❑ Post-Industrial Material Could be Substituted For Postconsumer Material
- ❑ Resin Switching to Achieve Source Reduction Compliance

Cost Impact of Alternatives

Post-Industrial Material Could Be Substituted

Cost to All Product Manufacturers (Year)	Cost to California Manufacturers (Year)	Cost for All California Users of RPPCs (Year)	Cost Per Impacted Container (cents)	Cost Per All Regulated Containers (cents)
\$1,036,000	\$259,000	\$2,006,000	0.4	0.05
Cost to 38.3 million CA Residents: 5 cents/year				
\$1,733,000	\$433,000	\$3,491,000	0.52	0.09
Cost to 38.3 million CA Residents: 9 cents/year				

Cost Impact of Alternatives

Resin Switching Allowed

Cost to All Product Manufacturers (Year)	Cost to California Manufacturers (Year)	Cost for All California Users of RPPCs (Year)	Cost Per Impacted Container (cents)	Cost Per All Regulated Containers (cents)
	\$346,000	\$2,752,000	0.5	0.07
Cost to 38.3 million CA Residents: 7 cents/year				
\$1,733,000	\$433,000	\$3,491,000	0.52	0.09
Cost to 38.3 million CA Residents: 9 cents/year				

FOR MORE INFORMATION

RPPC Website:

<http://www.calrecycle.ca.gov/Plastics/RPPC/>

RPPC Regulations Website:

<http://www.calrecycle.ca.gov/laws/rulemaking/rppc/>

QUESTIONS?