



The American Home Furnishings Alliance (AHFA) is the world's largest and most influential trade organization serving the home furnishings industry. The 450 member companies operate numerous domestic wood furniture manufacturing facilities and comprise an extensive global supply chain that provides a wide variety of home furnishings to the US consumer. Member companies provide approximately 300,000 manufacturing jobs throughout the US and represent a \$35-billion-dollar segment of the nation's economy.

Scope

1. As proposed, the EPA formaldehyde rule fundamentally changed the industry's business model. This is not in-line with congressional intent of the legislation and illustrates the agency's overreach during rulemaking.
 - a. The rule shifts the point of compliance thereby classifying every furniture manufacturer as a producer of composite wood products.
 - b. This shift alters the compliance scheme for all furniture manufacturers forcing them into a complex and costly testing and certification scheme that the Act was never intended to cover. This new role will require new equipment and additional personnel.
 - c. The rule depends on test methods that are fraught with '**compounding variability**' that must be accounted for in determining compliance or enforcement.
 - d. These changes/costs will be a new regulatory burden primarily on small businesses.
2. In calculating the rule's cost benefit, EPA stated '***the estimated cost of the proposed rule exceeded the quantified benefits***'.¹ The analysis is flawed in several ways:
 - a. It relies on an unrealistic expectation of a dramatic '***sea change***' in the industry in switching to an unproven NAF resin technology.² The legislative intent was to have EPA develop a regulation based on performance based emission limits without bias towards any particular resin system or manufacturing technology employed to demonstrate compliance.
 - b. It is based on a false assumption of unqualified 'avoided health effects'.³

¹ Formaldehyde Emissions Standards for Composite Wood Products, Implementing Rule, 40CFR Part 770 (EPA-HQ-OPPT-2012-0018; FRL-9342-3); RIN 2070-AJ92; Section 3, Costs and Benefits, pg.8.

²IBID, pg. 93

³ IBID, pg.8



'Formaldehyde Standards for Composite Wood Products'

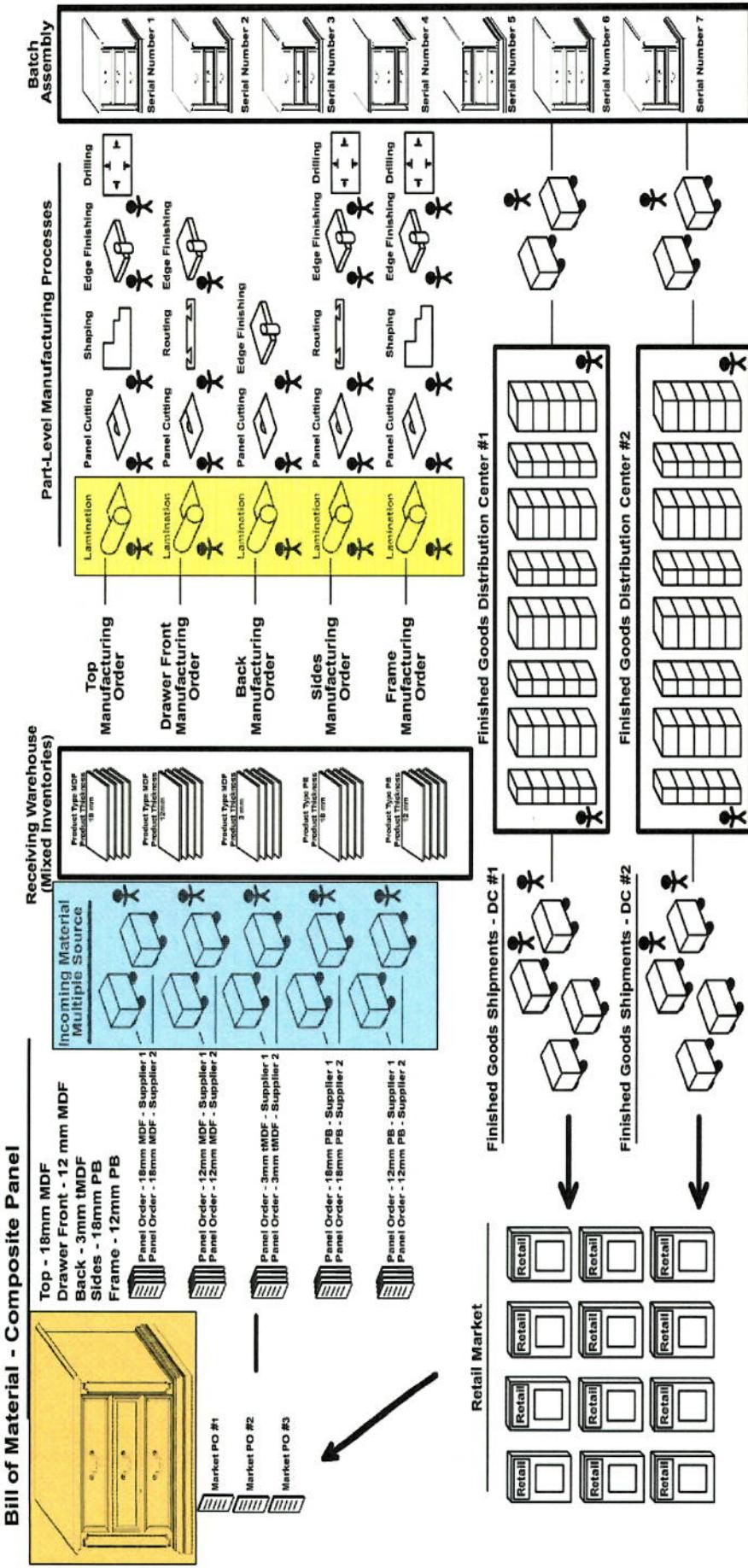
RIN 2070-AJ44
EPA-HQ-OPPT-2011-0380-0083
40 CFR 770
May 1, 2016



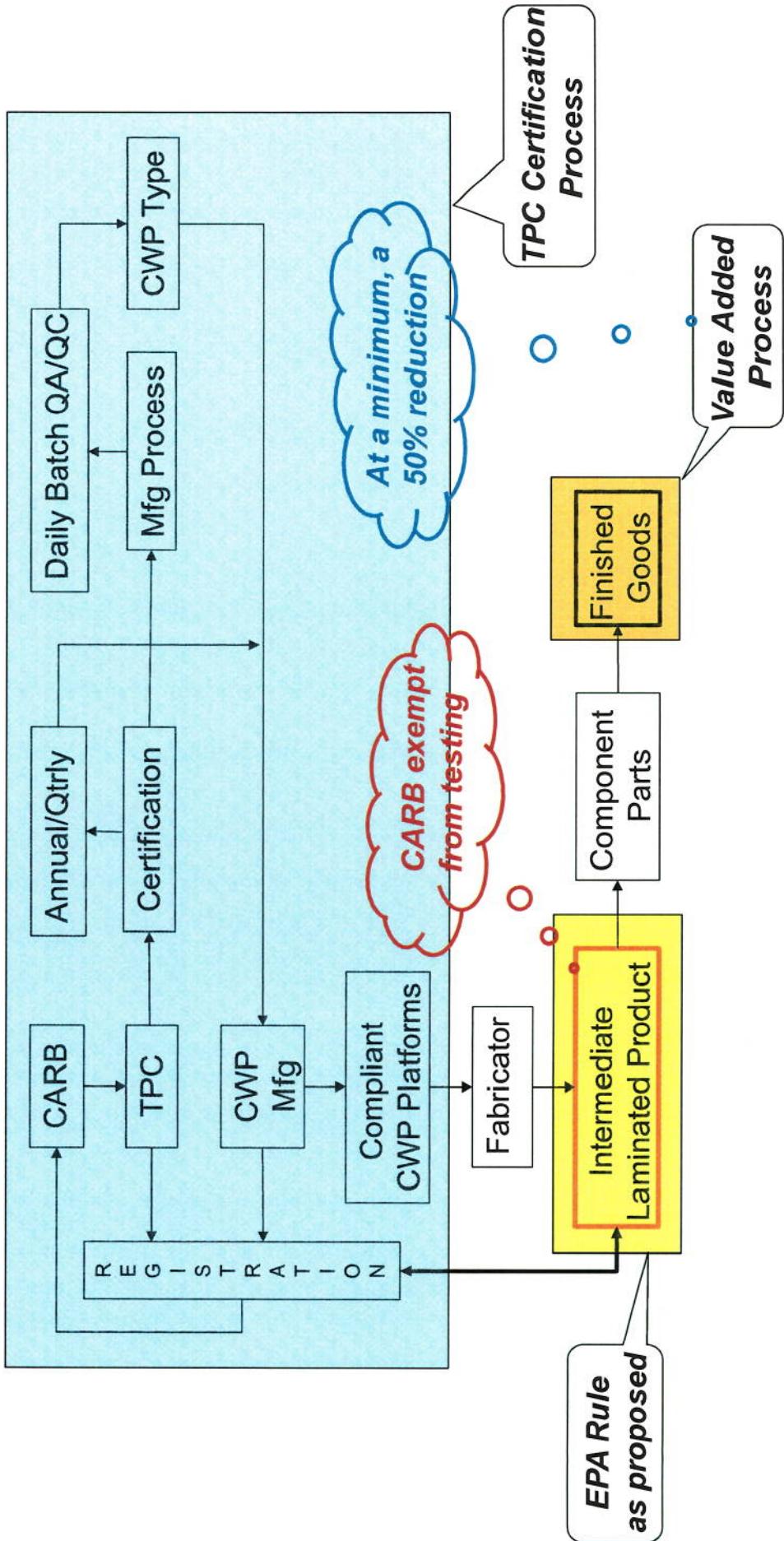
Shifting the Point of Compliance

'The Exponential Cost of Testing'

CWP Platform - Receipt to Retail

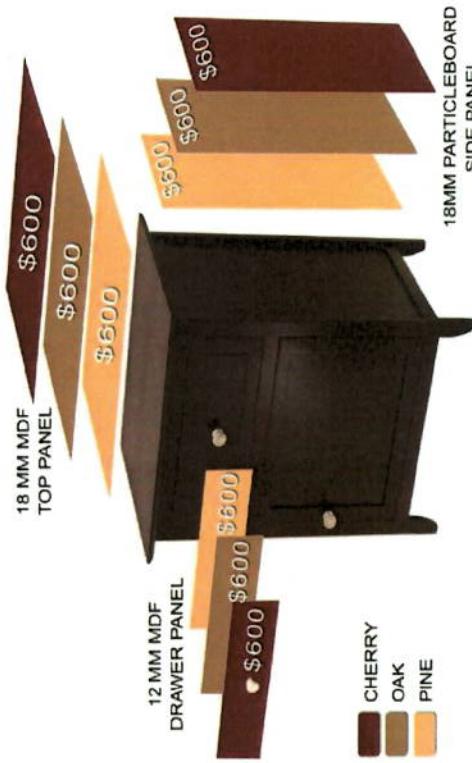


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EXCESSIVE TESTING COSTS

ONE STANDARD FURNITURE UNIT REQUIRING THREE
HARDWOOD-PLYWOOD TYPES AND OFFERED IN THREE FINISHES



The EPA's proposed rule would require daily batch testing for each hardwood-plywood type. Most units require multiple hardwood-plywood types and are offered in multiple finishes (or top veneers), causing testing costs to mount. Total testing cost for a typical piece of furniture, such as a nightstand, offered in a cherry, oak and pine veneer:

\$5,400 per day.

How Testing Costs Add Up

A **custom furniture** manufacturer might have an average of only 4 cuttings or production runs each day. If those cuttings average 3 types of hardwood-plywood per cutting, annual testing costs to meet the requirements of the EPA's proposed rule stack up like this:



Daily certification test per hardwood-plywood type	\$600
Quarterly certification test per hardwood-plywood type	\$600
Total certification testing per day	\$7,200
On-site quality personnel cost per year	\$77,000
Total daily certification testing per year	\$1,872,000
Total quarterly certification testing per year	\$5,040,000
TOTAL YEARLY COMPLIANCE COSTS:	\$6,995,000

This custom furniture manufacturer produces about 700 pieces per year at an average manufacturing cost of \$1,250 per piece.

The **average annual testing cost under the EPA's proposed rule would be **\$9,993** per piece.**

Total annual compliance costs (\$6.9 million) would exceed total annual payroll for this company (\$5.5 million).

A **mass market furniture** manufacturer might have an average of 24 cuttings or production runs each day. If those cuttings average only 2 types of hardwood-plywood per cutting, annual testing costs to meet the requirements of the EPA's proposed rule stack up like this:

Daily certification test per hardwood-plywood type	\$600
Quarterly certification test per hardwood-plywood type	\$600
Total certification testing per day	\$28,800
On-site quality personnel cost per year	\$77,000
Total daily certification testing per year	\$7,488,000
Total quarterly certification testing per year	\$12,000,000
TOTAL YEARLY COMPLIANCE COSTS:	\$19,571,000

This mass market furniture manufacturer produces approximately 2,500 pieces per year at an average manufacturing cost of \$182 per piece.

The **average annual testing cost under the EPA's proposed rule would be **\$7,828** per piece.**

Total annual compliance costs (\$19.5 million) are roughly equal to total annual payroll for this company (\$19.2 million).



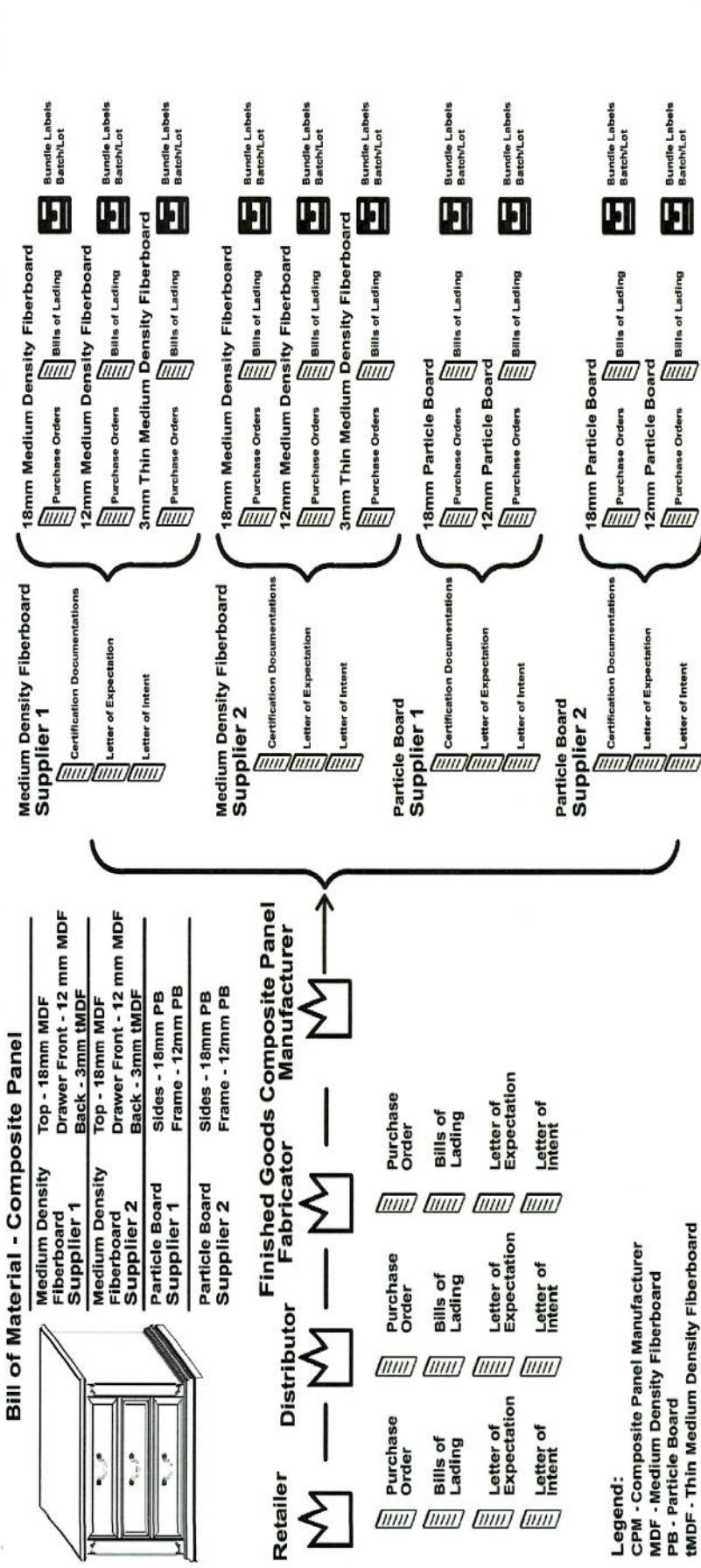
Compliance Framework

'Chain of Custody and Document Management'

Chain of Custody Document Example

Chain of Custody - 4 Entity Example w/ Multiple Panel Suppliers*

*Supply Chain Reality: Multiple suppliers for each TYPE of Composite Panel mixed in Production



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Fabricator Chain of Custody Documentation Costs: Handling

Global Chain of Custody Documentation Handling	
Document Movement, Assembly, Scanning, and Archiving	
Average Product Units within Chain of Custody "Cluster"**	40
Average Chain of Custody Documents per Cluster**	54
Admin and Handling Time per Document (minutes)	3
Administrative Costs per Minute (base upon \$7.50 per hour base)***	\$0.13
Annual Domestic Chain of Custody Clusters	2,295,554
Annual International Chain of Custody Clusters	2,925,500
Annual Domestic Chain of Custody Admin and Handling Costs	\$46,484,961
Annual International Chain of Custody Admin and Handling Costs	\$59,241,375
Annual Chain of Custody Documentation Administrative and Handling Costs	\$105,726,336

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Primary assumptions listed on following slide

Fabricator Chain of Custody Documentation Costs: Handling

- *Based on Customs information regarding pieces per container, averaged and extrapolated over US import volume for the Industry.
- **As illustrated by *Chain of Custody Multiple Supplier Model*, with its assumptions, there are **54 documents to be collected within each container**.
- ***Rates of pay assume **ONLY the federal minimum wage scale with no load**, not even required State and Federal taxes.
 - This figure also assumes an **entry level employee** with no work experience or higher education requirements, which is not current industry practice within this high risk regulatory activity.

Fabricator Chain of Custody Documentation Costs: Data Entry

Global Chain of Custody Data Entry	
Data Entry Processes from Chain of Custody into Supply Management System	
Data Entry Labor Time per Cluster (minutes)+	11
Administrative Costs per Minute (base upon \$7.50 per hour base)***	\$0.13
Annual Data Entry Hours - Domestic	401,722
Annual Data Entry Hours - International	511,963
Total Data Entry Hours (All Product)	913,684
Annual Chain of Custody Data Entry Costs	\$6,852,633

Fabricator Chain of Custody Documentation Costs: Data Entry

- Time study included only the actual activity of collecting, sorting, filing and archiving, and is based on a 'best case' scenario of experienced collection, professional grade scanning and archiving equipment and processes, which is not at all representative of the global picture.
- Calculated on Annualized Industry unit volume divided by projected minimum documentation 'clusters' (as illustrated in slide 8 above).

Fabricator Global Program Management

Global Program Management	
Program Management, Administrative, and IT Support	
Number of Companies Manufacturing or Importing Furniture Product (AHFA Data)	450
Annual Program Management , Administrative, and IT Support Costs	\$50,000
Annual Program Management, Administrative and Support Costs	\$22,500,000
Total Recurring Annual Compliance Costs	\$603,244,145
Total Recurring Annual Compliance Costs per Unit Sold	\$2.89
Current Compliance Costs as Percentage of Average Cost per Unit	3.1%

Fabricator Global Program Management

- This figure includes the salary and benefits of program management.
 - Including all ongoing training, systems oversight and outward communication up and down the supply chain.
- Most furniture companies report that their Compliance Directors and Managers occupy a higher level position within their organizations than this number would indicate.
 - Driven by the high level of risk, complexity and oversight required by the language, structure and uncertainty of the regulation.

Overall Cost of Compliance

<i>Composite Panel Manufacturers</i>	
Total Non-Recurring Costs	\$12,576,000.00
Total Recurring Costs	\$41,635,000.00
<i>Furniture Fabricators</i>	
Annual Cost of Compliance	\$603,244,145.00
<i>Combined Cost of Compliance for the Furniture Industry</i>	
Annual Cost of Compliance:	\$644,879,145.00
Overall Cost of Compliance	\$657,455,145.00

Overall Cost of Compliance

- Note that Furniture Fabricator cost are *all recurring costs*.
 - Cost can't be '*passed through*' to the customer.
 - Impacts the sale price, price point, and margin for all finished goods sold at retail.
- The calculation for annual costs incorporates only the recurring costs of both the composite panel manufacturers and furniture fabricators.
 - Impacts the cost of CWP used as component parts.
- The overall cost is *the sum* of the non-recurring and recurring costs.

Additional Observations

- The **annual cost** of this regulation to the manufacturers of the regulated product **reflects less than 7% of the annual regulatory cost to the Furniture Industry.**
- The costs incurred by the Furniture Industry to prove and defend compliance **do not necessarily represent an increased reduction in emissions or overall increase in health benefit to consumers.**
- Studies conducted by the California Air Resources Board, the Consumer Product Safety Commission, the Composite Panel Association and the Furniture Industry all demonstrate that the Furniture Industries' natural **value added processes of laminating**, veneering and finishing component composite panels **reduces emissions by no less than 50%,** regardless of the initial emissions measurements of the raw wood panels.

Summary

- Federal Laws to regulate formaldehyde should reflect the following principles:
 - Systems and Processes to verify the manufacture and certification of regulated products should be robust, consistent, statistically significant and subject to vigilant oversight.
 - Points of Control and Enforcement should be aligned for maximum benefit and enforceability.
 - Numerous models currently exist where product certification incorporates purchasing requirements for downstream users, UL registrations for electrical components as an example.
 - Downstream purchasers whose processes naturally support the intent of regulations should receive recognition for the additional safety of their products within a regulatory framework.
 - To advance the positive balance of trade our National Economy requires, Federal regulations should be written to complement or correlate with existing laws governing the Global Marketplace.



Compounded Variability

'The Difficulty of Enforcement and Compliance'

Compounding Correlation Variability

CARB ATCM - Composite
Wood Certification Program

