

Economic Impacts of Draft Air Cleaner Regulation

AB 2276 Workshop

California Air Resources Board

Sacramento, CA

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Economic Impact Assessment

- Required as part of ARB's Statement of Reasons and Staff Report
- Costs to typical and small businesses (initial and ongoing)
- Job creation/loss and CA competitiveness
- Cost to consumers, and government
- Preliminary estimates and data needs presented today



Results of UCB Air Cleaner Survey

- **Ownership of air cleaners in California households**
 - 2.3% own an “Ozone Generator” (OG; emits ozone intentionally)
 - 7.8% own a “By-Product” device (BP; emits ozone as a by-product, e.g. ionizing, electrostatic, & PCO)
 - 2.5% own a “Mechanical filtration-only” air cleaner
- **Household usage of air cleaners**
 - Large majority use one continuously (24/7)
- **Purchase price and year, by model type**

Costs to Manufacturer, Per Model: *Data Sources & Assumptions*

- **Every model type must be certified**
 - Model defined as units in ads, web, and CADR listings; cosmetic changes excluded
 - Models per manufacturer varies from 1 to ~ 60
- **Redesign Costs per Model:**
 - All OGs: \$20,000
 - High-emitting BP's (15%): \$10,000
 - Low-emitting BP's (85%) and Mechanical: \$0
 - Annualized (amortized) for 5 years at 5%

Data Sources & Assumptions, contd.

- **Testing Costs per Model**
 - **OGs:**
Prototypes, 3 @ \$2K + Final UL test, 2 @ \$6.5K = \$19K
 - **BP's, High Ozone Emitters (15%):**
Prototypes, 2 @ \$2K + Final UL tests, 2 @ \$6.5K = \$17K
 - **BP's, Low Ozone Emitters (85%):**
Prototype, 1 @ \$2K + Final UL test, 1 @ \$6.5K = \$8.5K
- **Labeling Costs for new ARB requirements, per model**
 - \$17.5K for OG's; range of \$5 - 30K
 - \$10K for all others; range of \$5 - 15K

Data Sources & Assumptions, contd.

- **Initial Total costs per model are the sum of costs for redesign, testing, and labeling, and are annualized over 5 years at a 5% discount**
- **Model Turnover (ongoing cost): 10% of all models are replaced each year**
 - Turnover cost would be less than the sum of the initial labeling and testing cost
- **Annual Costs would be the sum of annualized costs plus model turnover (ongoing) costs**

Cost to Manufacturer, Per Model: *Preliminary Estimates*

Model Type and #	Redesign Cost (\$)	Testing (\$)	Label (\$)	Initial Total (\$)
Ozone Generator				
1	20,000	19,000	17,500	56,500
By-Product: High ozone emitter				
1	10,000	17,000	10,000	37,000
By-Product: Low ozone emitter				
1	NA	8,500	10,000	18,500
Mechanical				
1	NA	4,500	10,000	14,500

Preliminary Estimates, per Model, contd.

Model		Initial
Type	Initial	Annualized
and #	Total (\$)	Cost (\$)
Ozone Generator		
1	56,500	13,000
By-Product: High ozone emitter		
1	37,000	8,500
By-Product: Low ozone emitter		
1	18,500	4,300
Mechanical		
1	14,500	3,300

Annual turnover costs / model:
 \leq Testing + Labeling Costs

Other Costs

- **Cost to the State Economy:**
TBD, data needed
- **Small Businesses:** TBD, data needed
- **Jobs Added or Lost:** TBD, data needed
- **Cost to Consumer:**
 - TBD, data needed
 - Expected to be minimal: preliminary estimate is ~ \$3 per unit

Data Needs for Economic Assessment

- **CALIFORNIA SALES**

- Total number of models sold in CA by all manufacturers
- Number of units sold per manufacturer, by model
- Model type (OG, BP, Mechanical)
- List price and cumulative markup (manufacturer to consumer)

Data Needs, contd.

- Estimated redesign costs, by model type
- Testing costs: prototypes plus final, by model type
- Labeling costs, by model type
- Models with existing UL standard certification
- # of California jobs: current, and added or lost

CONCLUSIONS

- ARB needs information from manufacturers and test labs to assess accurately the economic impacts on manufacturers and on the state.
- ARB will again contact manufacturers to obtain such data. Please send your data.
- Preliminary estimates indicate that the costs to consumers will be small, relative to the purchase price.

