

Overview of the Decision-Making Process Used by CARB to Develop the List of Consumer Products for the VOC Limit Regulations

GENERAL APPROACH

The California Air Resources Control Board (CARB) develops its consumer product regulations in a phased approach. The product prioritization process that underlies this phased approach is based on the goal of reducing volatile organic compounds (VOC) emissions to meet targets outlined in CARB's 2007 State Implementation Plan (SIP). The timeline for adopting regulations for additional product categories is driven by deadlines for emission reduction targets outlined in the SIP. To date more than 150 VOC limits for 131 categories of consumer products have been established.

Product lists and VOC limits are proposed and ultimately adopted through an iterative process that includes: stakeholder input (obtained through workshops and surveys); and CARB staff research, shelf review, literature review, data analysis, and analysis of industry trends and publications. Stakeholders include consumer product manufacturers, chemical producers, marketers, trade associations, environmental groups, health organizations, air districts, and various State and federal agencies. Data summaries of industry surveys are posted on CARB's website to provide a starting point for further discussions.

Data collection and analysis includes consideration of:

- Market share (based on sales) of VOC emissions for each product category
- Commercial and technological feasibility
- Environmental impacts (multi-media and environmental justice impacts are considered)
- Economic Impacts --- Evaluation of the costs to comply with proposed VOC limits, including potential impacts on profitability (based on "return-on-owner's equity") and other aspects of businesses (with particular attention to California businesses), the cost-effectiveness of the limits, and the estimated cost impacts to consumers. Estimated costs are based on assumptions specific to each product category depending on reformulation needs. For some categories it is assumed that manufacturers would either drop certain products or undergo minor product formulation changes; and for other categories, it is assumed manufacturers would undergo complete production line overhaul and equipment replacement rather than simple retooling.

DECISION-MAKING CRITERIA

(1) *The Product's Contribution to VOC Emissions*

The CARB prioritization process is driven by data from its emissions inventory database, stakeholder surveys, and staff research and data analysis. This information is used to help CARB identify the largest sources of VOC emissions, evaluate reformulation options, and determine if there are existing low VOC alternatives. Specifically, the surveys and information include information about:

- Formulations of consumer products, including complete speciation of VOCs, low vapor pressure VOC (LVP-VOC) solvents, and key exempt ingredients.
- Total volumes of inorganic and other compounds.
- Information on sales, product form, customer types, and company size and economics.

(2) *Availability of Viable Alternatives*

Once initial product categories are identified, CARB evaluates alternatives for reformulation. This analysis includes:

- Evaluating the range of VOC content in a given product category. Products with lower VOC content that have reasonable market share may serve as an initial basis for determining feasible VOC limits.
- If all products reported have similar VOC content, CARB determines if there are technologies that can be used to lower VOC content. This effort relies in part on stakeholders presenting potential reformulation options.
- CARB also sets “future second tier effective limits” as well as “near term effective limits” on VOC content. This approach is used when CARB determines there is the possibility for technology transfer within a given timeframe in the future from another source category or an emerging technology requiring further development.

(3) Other Considerations

- Generally, CARB seeks to regulate product categories for which it is determined, based on available information, that the setting of VOC limits would achieve significant emission reductions and that such limits are commercially and technologically feasible.
- Additionally, early in the program, CARB identified high priority product categories where: they could make a data-supported argument; there was general stakeholder support for regulating the product category; and there were known reformulation options or technology under development that would be commercialized in a predictable timeframe.
- As reductions needed to meet SIP commitments become more difficult to achieve, product categories that do not necessarily have the highest VOC emissions, but for which there are identified options for reformulation, are also selected.