



Economic Impact Analysis Virginia Department of Planning and Budget

9 VAC 5-10 – Regulations for the Control and Abatement of Air Pollution
Department of Environmental Quality
September 21, 2009

Summary of the Proposed Amendments to Regulation

The State Air Pollution Control Board (Board) proposes to add propylene carbonate and dimethyl carbonate to the list of substances not considered volatile organic compounds (VOCs).

Result of Analysis

The benefits likely exceed the costs for all proposed changes.

Estimated Economic Impact

Section 109 (a) of the federal Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to prescribe national ambient air quality standards (NAAQS) to protect public health. Section 110 mandates that each state adopt and submit to EPA a plan (the state implementation plan or SIP) which provides for the implementation, maintenance, and enforcement of the NAAQS. Ozone, one of the pollutants for which there is a NAAQS, is in part created by emissions of VOCs. Therefore, in order to control ozone, VOCs are addressed in Virginia's SIP.

Federal regulation 40 CFR Part 51 sets out requirements for the preparation, adoption, and submittal of SIPs and includes a definition of VOC. This definition is periodically revised by EPA in order to add or remove VOCs as necessary. If, for example, it can be demonstrated that a particular VOC is negligibly reactive, then EPA may remove that substance from the definition of VOC.

On January 21, 2009, EPA revised the definition of VOC to exclude two substances from the definition of VOC: propylene carbonate and dimethyl carbonate. This exclusion is accomplished by adding the substances to a list of substances not considered to be a VOC.

Consequently, the Board proposes to add propylene carbonate and dimethyl carbonate to the list of substances not considered VOCs in Virginia's Regulations for the Control and Abatement of Air Pollution.

Propylene carbonate can be used in cosmetics, as an adhesive component in food packaging, as a solvent for plasticizers and synthetic fibers and polymers, and as a solvent for aerial pesticide application.¹ Dimethyl carbonate may be used as a solvent in paints and coatings, or in waterborne paints and adhesives. It may also be used as a methylation and carbonylation agent in organic synthesis, and can be used as a fuel additive.² According to the Department of Environmental Quality (DEQ), neither propylene carbonate nor dimethyl carbonate are currently known to be used in Virginia. By being added to the list of substances not considered VOCs, firms could start using these substances instead of substances that continue to be considered VOCs, and would have their official VOC emissions be considered lower. This would potentially allow firms greater flexibility in meeting Board permit requirements. DEQ is not aware of any firms that plan to do this, but the potential for future firms to reduce costs this way would exist. If firms were to start using propylene carbonate and dimethyl carbonate instead of other substances there would be no increase in air pollution and possibly a reduction. Since there would be no harm to air quality, and there is the potential for cost savings for firms, the Board's proposal creates a net benefit.

Businesses and Entities Affected

According to DEQ, neither propylene carbonate nor dimethyl carbonate are currently known to be used in Virginia. Propylene carbonate can be used in cosmetics, as an adhesive component in food packaging, as a solvent for plasticizers and synthetic fibers and polymers, and as a solvent for aerial pesticide application. Dimethyl carbonate may be used as a solvent in paints and coatings, or in waterborne paints and adhesives. It may also be used as a methylation and carbonylation agent in organic synthesis, and can be used as a fuel additive. Thus, there is the potential that firms involved in these activities may at some time in the future choose to use propylene carbonate or dimethyl carbonate.

¹ Source: Department of Environmental Quality

² Ibid

Localities Particularly Affected

There is no locality which will bear any identified disproportionate impact due to the proposed amendments.

Projected Impact on Employment

The proposal to add propylene carbonate and dimethyl carbonate to the list of substances not considered VOCs would potentially allow firms greater flexibility in meeting Board permit requirements. This greater flexibility may allow some firms to operate at lower cost which could potentially make more business activity profitable. If more business activity becomes profitable, there is the potential for increased business activity and employment. As of now though, DEQ is not aware of any Virginia firms with immediate plans to use propylene carbonate or dimethyl carbonate.

Effects on the Use and Value of Private Property

The proposal to add propylene carbonate and dimethyl carbonate to the list of substances not considered VOCs would potentially allow firms greater flexibility in meeting Board permit requirements. This greater flexibility may allow some futures to operate at lower cost which could potentially make more business activity profitable.

Small Businesses: Costs and Other Effects

The proposal is not expected to increase costs for small businesses.

Small Businesses: Alternative Method that Minimizes Adverse Impact

The proposal is not expected to increase costs for small businesses.

Real Estate Development Costs

The proposed amendments are not expected to significantly affect real estate development costs.

Legal Mandate

The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with Section 2.2-4007.04 of the Administrative Process Act and Executive Order Number 36 (06). Section 2.2-4007.04 requires that such economic impact analyses include, but need not be limited to, the projected number of businesses or other entities

to whom the regulation would apply, the identity of any localities and types of businesses or other entities particularly affected, the projected number of persons and employment positions to be affected, the projected costs to affected businesses or entities to implement or comply with the regulation, and the impact on the use and value of private property. Further, if the proposed regulation has adverse effect on small businesses, Section 2.2-4007.04 requires that such economic impact analyses include (i) an identification and estimate of the number of small businesses subject to the regulation; (ii) the projected reporting, recordkeeping, and other administrative costs required for small businesses to comply with the regulation, including the type of professional skills necessary for preparing required reports and other documents; (iii) a statement of the probable effect of the regulation on affected small businesses; and (iv) a description of any less intrusive or less costly alternative methods of achieving the purpose of the regulation. The analysis presented above represents DPB's best estimate of these economic impacts.