

Adverse impact notification sent to Joint Commission on Administrative Rules, House Committee on Appropriations, and Senate Committee on Finance (COV § 2.2-4007.04.C): Yes Not Needed

If/when this economic impact analysis (EIA) is published in the *Virginia Register of Regulations*, notification will be sent to each member of the General Assembly (COV § 2.2-4007.04.B).



Virginia Department of Planning and Budget Economic Impact Analysis

16 VAC 25 -50 Boiler and Pressure Vessel Regulations
Department of Labor and Industry
Town Hall Action/Stage: 4543 / 7834
April 20, 2017

Summary of the Proposed Amendments to Regulation

As the result of a periodic review,¹ the Safety and Health Codes Board (Board) proposes to adopt the most current versions of several documents incorporated by reference that set out boiler and pressure vessel standards, as well as several forms.

Result of Analysis

The benefits likely exceed the costs for all proposed changes.

Estimated Economic Impact

The Board proposes to adopt the following most recent published editions of safety and inspection codes already incorporated by reference into the regulation:

- 2015 Boiler and Pressure Vessel Code, ASME Code, American Society of Mechanical Engineers;
- ANSI/NB 23, 2015 National Board Inspection Code, National Board of Boiler and Pressure Vessel Inspectors;
- ASME B31.1, ASME Code for Power Piping, American National Standards Institute,

¹ <http://townhall.virginia.gov/ViewPReview.cfm?PRid=1496>

2014;

NFPA 85 Boiler and Combustion Systems Hazards, 2015 Edition, National Fire Protection Association;

- Part CG (General), Part CW (Steam and Waterside Control) and Part CF (Combustion Side Control) Flame Safeguard of ANSI/ASME CSD-1, Controls and Safety Devices for Automatically Fired Boilers, 2012, American Society of Mechanical Engineers; and
- API510, Pressure Vessel Inspection Code, Maintenance Inspection, Rating, Repair and Alteration, Tenth Edition, May 2014, American Petroleum Institute.

These documents have not been updated in the regulation since 2008. The Department of Labor and Industry (DOLI) reports that the difference between the current and updated standards reflect the most recent technology available and will provide increased protection to human life and property. For the most part the updated standards do not increase costs for affected firms. The new standards specifically would though require that new businesses with carbon dioxide (CO₂) tanks for liquid beverage dispensers have signs and CO₂ meters/alarms.²

CO₂ storage safety meters/alarms protect customers, employees and emergency first-responders near stored carbon dioxide. A leak anywhere in a stored CO₂ delivery system can quickly fill an enclosed area with potentially dangerous CO₂ levels. Higher concentrations of CO₂ can affect respiratory function and cause excitation followed by depression of the central nervous system. A high concentration can displace oxygen in the air. If less oxygen is available to breathe, symptoms such as rapid breathing, rapid heart rate, clumsiness, emotional upsets and fatigue can result. As less oxygen becomes available, nausea and vomiting, collapse, convulsions, coma and death can occur. Lack of oxygen can cause permanent damage to organs including the brain and heart.³

² Virginia companies that utilize ASME, NBIC, and NFPA standards are already required to comply with the proposed standards.

³ Source: Canadian Centre for Occupational Health and Safety:
https://www.ccohs.ca/oshanswers/chemicals/chem_profiles/carbon_dioxide.html

CO₂ storage safety meters/alarms (and signage) that meet the proposed standards would cost approximately \$500.⁴ Given the potential health risks of undetected CO₂ as described above, the benefits of the proposed requiring of CO₂ storage safety meters/alarms and informative signage likely exceeds the cost.

Businesses and Entities Affected

The proposed amendments potentially affect businesses that manufacture, repair, own, or operate boilers or pressure vessels. DOLI estimates that there are approximately 25,000 small businesses among these type of firms. New businesses with CO₂ tanks for liquid beverage dispensers, such as restaurants, convenience stores, breweries, etc., would be particularly affected.

Localities Particularly Affected

The proposed amendments do not disproportionately affect particular localities.

Projected Impact on Employment

The proposed amendments would likely increase the demand for CO₂ storage safety meters/alarms. The firms that manufacture and/or sell them may commensurately increase employment.

Effects on the Use and Value of Private Property

The proposed amendment does not significantly affect the use and value of private property.

Real Estate Development Costs

The proposed amendments do not affect real estate development costs.

Small Businesses:

Definition

Pursuant to § 2.2-4007.04 of the Code of Virginia, small business is defined as “a business entity, including its affiliates, that (i) is independently owned and operated and (ii) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million.”

⁴ <https://www.co2meter.com/products/remote-co2-storage-safety-alarm-ip65> viewed on April 20, 2017.

Costs and Other Effects

The proposed amendments require that new small businesses that have CO₂ tanks for liquid beverage dispensers have signs and CO₂ meters/alarms. This would increase costs for such small firms (restaurants, convenience stores, breweries, etc.) by about \$500 for each area that has CO₂ tanks for liquid beverage dispensers.⁵

Alternative Method that Minimizes Adverse Impact

There is no apparent alternative method that meets the intended safety goals at a lower cost.

Adverse Impacts:

Businesses:

The proposed amendments require that new businesses that have CO₂ tanks for liquid beverage dispensers have signs and CO₂ meters/alarms. This would increase costs for such firms (restaurants, convenience stores, breweries, etc.) by about \$500 for each area that has CO₂ tanks for liquid beverage dispensers.⁶

Localities:

The proposed amendments do not adversely affect localities.

Other Entities:

The proposed amendments do not adversely affect other entities.

Legal Mandates

General: The Department of Planning and Budget has analyzed the economic impact of this proposed regulation in accordance with § 2.2-4007.04 of the Code of Virginia (Code) and Executive Order Number 17 (2014). Code § 2.2-4007.04 requires that such economic impact analyses determine the public benefits and costs of the proposed amendments. Further the report should include but not be limited to: (1) the projected number of businesses or other entities to whom the proposed regulatory action would apply, (2) the identity of any localities and types of businesses or other entities particularly affected, (3) the projected number of persons and employment positions to be affected, (4) the projected costs to affected businesses or entities to implement or comply with the regulation, and (5) the impact on the use and value of private property.

Adverse impacts: Pursuant to Code § 2.2-4007.04(C): In the event this economic impact analysis reveals that the proposed regulation would have an adverse economic impact on businesses or would impose a significant adverse economic impact on a locality, business, or entity particularly affected, the Department of Planning and Budget shall advise the Joint Commission on Administrative Rules, the House Committee on Appropriations, and the Senate Committee on Finance within the 45-day period.

⁵ Ibid

⁶ Ibid

If the proposed regulatory action may have an adverse effect on small businesses, Code § 2.2-4007.04 requires that such economic impact analyses include: (1) an identification and estimate of the number of small businesses subject to the proposed regulation, (2) the projected reporting, recordkeeping, and other administrative costs required for small businesses to comply with the proposed regulation, including the type of professional skills necessary for preparing required reports and other documents, (3) a statement of the probable effect of the proposed regulation on affected small businesses, and (4) a description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation. Additionally, pursuant to Code § 2.2-4007.1, if there is a finding that a proposed regulation may have an adverse impact on small business, the Joint Commission on Administrative Rules shall be notified.

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