



Economic Impact Analysis Virginia Department of Planning and Budget

16 VAC 25-50 – Boiler and Pressure Vessel Rules and Regulations Department of Labor and Industry June 7, 2002

The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with Section 9-6.14:7.1.G of the Administrative Process Act and Executive Order Number 25 (98). Section 9-6.14:7.1.G 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. The analysis presented below represents DPB's best estimate of these economic impacts.

Summary of the Proposed Regulation

The Virginia Safety and Health Codes Board proposes to 1) accept credit card payments for certificate fees, and 2) to require that newly installed steam boilers have two automatic low-water fuel cutoffs with manual resets.

Estimated Economic Impact

The proposed regulations add credit cards to the list of acceptable methods of certificate payment. Since no payment option has been eliminated and some boiler and pressure vessel owners may prefer to pay by credit card, this proposed change is beneficial for boiler and pressure vessel owners. The Department of Labor and Industry (department) finds payment by credit card to be advantageous in that the agency receives payment more quickly than under other methods. Thus, adding credit cards to the list of acceptable methods of certificate payment creates a net benefit.

Consistent with national standards, the board proposes to require that newly installed low-pressure boilers have two low-water fuel cutoffs and that all newly installed boilers have manual resets. Several manufacturers are already producing boilers that meet the new standards. A manual reset helps to prevent an explosion of a boiler by causing a safety shutdown and lockout in the event a safety valve malfunctions or the boiler material fails. The agency reports that, according to the National Board of Boiler and Pressure Vessel Inspectors, there have been 4,000 reported incidents in the U.S. involving low water conditions in the past five years. In Virginia, during this same period, there were eight incidents reported involving low water conditions. These events resulted in injuries and significant property damage. According to the department, such explosions have the potential to destroy an entire city block. The agency believes that the proposed additional controls significantly lower the probability of such accidental explosions. No data or research is available to estimate the reduced probability.¹

The department estimates that boilers with a second low-water fuel cutoff and manual resets would cost \$500 to \$800 more than boilers without the additional controls. Without any estimate of the reduction in likelihood of boiler explosions due to the presence of the additional controls, it cannot be determined whether the benefits garnered from reduced probability of bodily injury and property damage exceed the \$500 to \$800 higher cost per new boiler.

Since the additional controls requirement only applies to new installations and adds non-negligible cost, some boiler owners may delay replacing their old boilers with new installations. In the short term, assuming that old boilers may be somewhat more likely to fail, the risk of accidents may increase. In the longer term, once all or most of the current boilers that do not meet the proposed requirements are replaced, the risk of accidents should decrease.

Businesses and Entities Affected

The proposed amendments potentially affect current and future steam boiler owners, firms that sell steam boilers, firms that manufacture the newly required controls, and individuals who spend time within the vicinity of steam boilers. The department estimates that up to 1,000 new steam boilers will be purchased per year.

¹ Source: Department of Labor and Industry

Localities Particularly Affected

The proposed amendments potentially affect all Virginia localities.

Projected Impact on Employment

The proposed amendments may increase employment for firms that manufacture the proposed new required controls.

Effects on the Use and Value of Private Property

The manufacturers of the proposed new required controls will likely be able to sell more of their product and increase their firms' value. Purchasers of steam boilers will face higher costs, which will likely reduce their firms' value somewhat. Some firms that currently use steam boilers may opt to use a different heat source when the usable lifespan of their current boiler ends.