

# Safety Performance Standards in the Rail Industry

ASSOCIATION OF AMERICAN RAILROADS

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## WHAT SHOULD BE DONE?

Adopt performance standards in place of rigid design-based rules to regulate safety in the railroad industry.

## WHY?

Under safety performance standards, railroads would have the opportunity and incentive to achieve the desired outcome — safer operations — as efficiently as possible. Performance standards would rely on the superior knowledge railroads and rail employees have regarding their operations, and would give railroads the discretion to experiment with new technologies and processes to improve safety. The result would be improved safety performance at a lower cost to the Federal Railroad Administration, rail customers, and railroads.

## Overview of Performance Standards

There are two general approaches to workplace safety regulation: “design-based standards” and “performance standards.”

Design-based standards, the method most commonly used by the Federal Railroad Administration (FRA), specify the precise characteristics of workplace facilities, equipment, and processes a firm must use in the manufacture and delivery of its product or service. For example, existing FRA regulations on the frequency of certain locomotive inspections state that the interval between inspections “may not exceed 92 days.”

In contrast, performance-based standards define the desired result rather than mandating the precise characteristics that a workplace must exhibit. The point of a performance-based goal is to focus attention and effort on the outcome, not the method. How goals are achieved is largely left to the regulated firm or industry.

Under one type of safety regime based on performance standards, each railroad would have goals for train safety (*e.g.*, accidents per million train-miles) and employee safety (*e.g.*, injuries per 100 employees) as part of a comprehensive risk management plan, based on targets set by the industry and approved by the FRA. If a railroad failed to meet these goals, it would come under increased FRA scrutiny, would be required to take additional measures to correct the problems, and would eventually be subject to fines or even a return to design-based regulation.

While some (but not all) of the old regulations would be suspended under a performance standard regime, the FRA would retain the power to conduct safety audits and to impose emergency directives at any time to protect public safety. Railroads have proposed a performance standard pilot project focused on locomotive inspections.

## Why Performance Standards Are Superior to Design-Based Standards

Railroads have strong incentives to improve safety and reduce the costs of injuries and accidents. They and their employees are in the best position to know how to do this.

- Risk-based performance standards are a reform, not an abandonment, of safety regulation. Except in emergencies or after continued failure to meet targets, the FRA would no longer specify how a railroad would achieve its safety goals. Instead, the FRA would oversee and validate the goal-setting process, ensure that the measures and data used are accurate, and impose any necessary sanctions.
- There is little evidence that rigid design-based standards have a positive impact on railroad safety. They are, however, very costly for both railroads and the FRA to administer and maintain. They also tend to impede innovation because they “lock in” existing designs, technology, and ways of thinking.<sup>1</sup>
- Performance standards have been encouraged elsewhere in the U.S. government. For example, the 1990 Amendments to the Clean Air Act directed electric utilities to limit their emissions of sulfur dioxide and nitrogen oxide, but did not tell the utilities how to meet those standards. The 1996 Accountable Pipeline Safety and Partnership Act promotes the use of risk management plans that are essentially a performance standard approach. And in the area of meat and poultry inspection, scientific practices for identifying and reducing microbial contamination have partly displaced strict regulations that prescribe in detail how food safety objectives are to be achieved.
- In Canada, the Railway Safety Act of 1989 explicitly encouraged the adoption of performance standards for that country’s rail industry.
- Reliance on a performance-based approach would allow the FRA the best opportunity to ensure the attainment of desired safety rates at lower cost for the FRA as well as for railroads.

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<sup>1</sup> The infamous discolored wheel rule is a classic example of a regulation that discourages the use of new technology. For many years, this FRA rule required railroads to remove wheels that showed four or more inches of discoloration, which at the time was thought to portend possible wheel failure. However, research in the 1980s demonstrated conclusively that discoloration in the newer heat-treated, curved-plate wheels did not portend failure. Despite this evidence, the FRA took more than a decade to exempt such wheels from the requirement, during which railroads were forced to discard perfectly safe wheels at a cost that reached \$100 million per year.