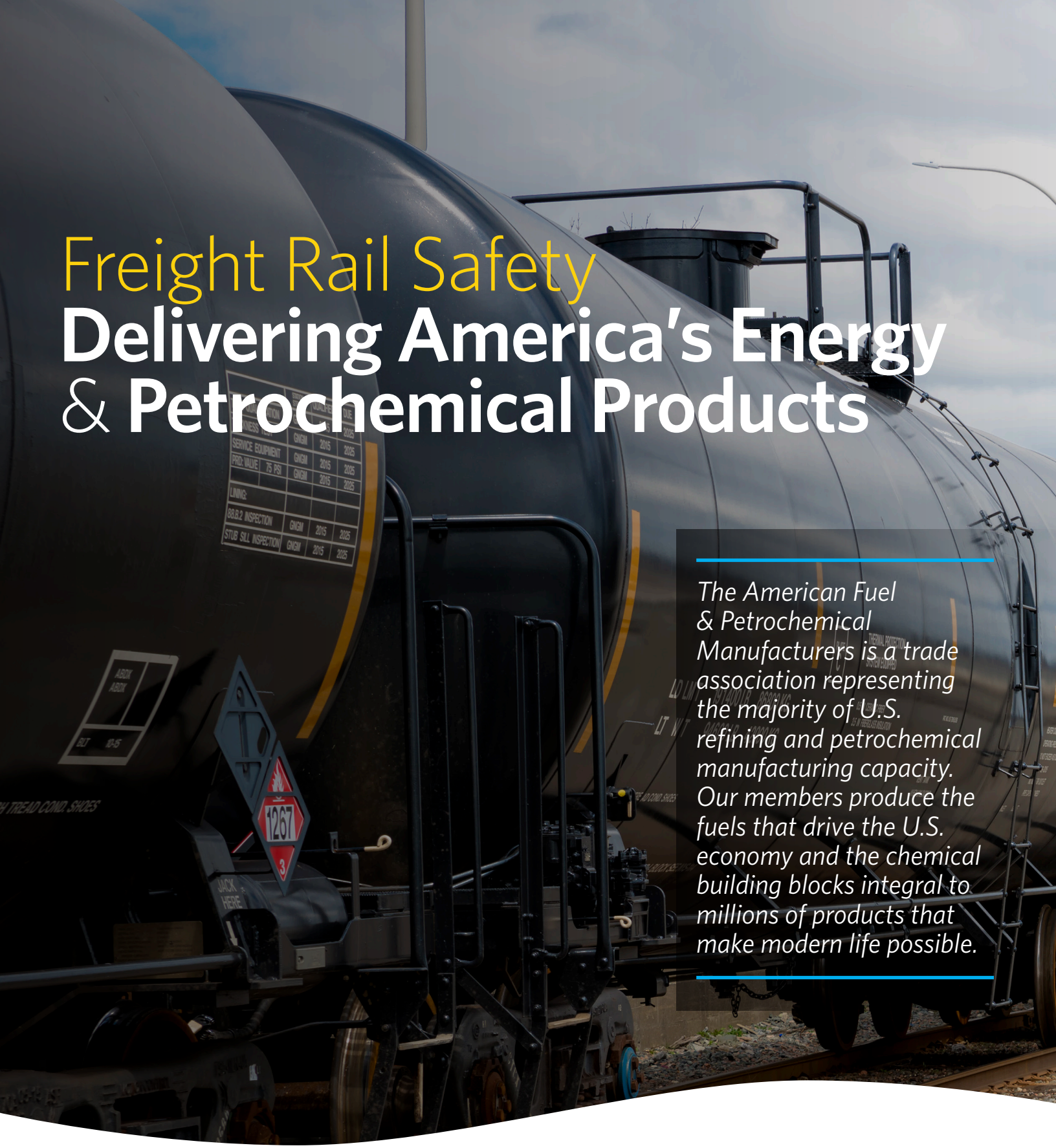
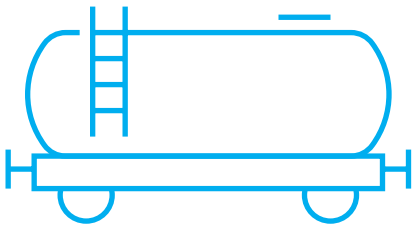


Freight Rail Safety
Delivering America's Energy & Petrochemical Products

The American Fuel & Petrochemical Manufacturers is a trade association representing the majority of U.S. refining and petrochemical manufacturing capacity. Our members produce the fuels that drive the U.S. economy and the chemical building blocks integral to millions of products that make modern life possible.

AFPM



Over 3.5 million carloads of fuel and chemical feedstocks and products —crude oil, NGLs, refined products, plastics and synthetic resins—were delivered by rail in the United States in 2018.

Manufacturing Relies on Rail

Fuel and petrochemical makers rely on a safe, reliable, and efficient rail system to move products to and from their facilities. Rail transportation is also vital to the manufacturers and customers downstream who depend on our products, and to the broader U.S. economy.

AFPM is committed to improving rail transportation and infrastructure, and our efforts are guided by three principles:

Safety & Security—Ensuring the ability to ship feedstocks and products safely and securely.

Free & Open Markets—Promoting free and open energy markets that allow the efficient transport of goods and benefit the U.S. economy.

Ability to Build & Repair—Providing the ability to build, use, repair, maintain and replace energy infrastructure.

Our Commitment to a Safer Rail System

A safe rail system is essential to our industries and those who rely on our products. As such, we are deeply committed to continuous improvement in rail-system safety, including investing hundreds of millions of dollars in recent years to increase the durability of tank cars and providing support for first responders. Fuel and petrochemical manufacturers also work to ensure that changes in the rail system intended to improve safety are supported by scientific evidence.

Improving rail safety is a shared responsibility, and all rail stakeholders must take proper action for the U.S. rail system to thrive. AFPM encourages the rail industry and regulators to intensify efforts to prevent derailments and address their root cause, as keeping cars safely on tracks decreases the need for post-derailment mitigation measures.

Investing in Stronger, Improved Tank Cars

Fuel and petrochemical manufacturers, along with other shippers, have invested hundreds of millions of dollars to upgrade and retrofit their tank-car fleets to enhance the safety of the U.S. rail system. Even before the U.S. Department of Transportation (DOT) and Congress required it through the 2105 FAST Act, shippers were voluntarily making safety improvements to their fleets, switching from the DOT-111 tank cars to upgraded and safer DOT-117 standards. Fleets have also been rendered safer by phasing out tank cars not capable of safely carrying Toxic-by-Inhalation hazardous materials.

From 2013 to 2020, rail shippers purchased more than 35,000 of the newest and safest DOT-117J tank cars and retrofitted more than 30,000 existing tank cars. These enormous investments by shippers have resulted in significant improvements in safety and rail car durability. According to the Association of American Railroads, since 2013 the U.S. flammable liquid fleet has realized a 74% reduction in Conditional Probability of Release—a measure of tank car puncture resistance—for crude oil, and a 52% reduction for ethanol over the same time period.

From 2013 to 2019, rail shippers acquired more than 35,000 of the newest and safest DOT-117J tank cars and retrofitted more than 30,000 existing tank cars to meet the highest safety standards of the new tank cars.

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Advocating for Evidence-based Rail Safety Improvements

Fuel and petrochemical manufacturers also implement and advocate for evidence-based changes to improve the safety of the rail system. Similarly, we actively oppose policies that are not backed by science or would fail to deliver true safety gains, to avoid resources being wasted on achieving false perceptions of progress.

Vapor Pressure Mandates Lack Evidence, Would Not Enhance Safety or Address Root Cause of Derailments

Recent state and federal efforts to, in the name of safety, restrict the vapor pressure (known as RVP) in rail tanks carrying unrefined petroleum products are not backed by science and would not increase rail safety. In fact, DOT, the U.S. Department of Energy, Sandia National Laboratory, and Transport Canada conducted exhaustive research and testing on the issue of vapor pressure limits and found:

Vapor pressure does not significantly impact the consequences or danger of a derailment, should one occur. The study authors were so confident that vapor pressure is not a significant factor in affecting the outcome of thermal hazards that they also concluded their findings could be applied to "crude oils and most hydrocarbon liquids that exceed the vapor pressures of the crude oils tested here."

Vapor pressure should not be used to make regulatory distinctions. According to the study, there is no scientific support for making regulatory distinctions based on vapor pressure.

Additional research on vapor pressure is not necessary. The study authors consider this research complete. Specifically, the report notes "[t]he empirical data gathered by Sandia during the Task 3 work, coupled with publicly available data cited in the report, provide sufficient data on which to draw the conclusions contained herein. As such, additional data collection in a Task 4 effort is not required to support Task 3."

The current hazardous material classification system is harmonized federally and internationally to ensure the safe and free movement of materials in global trade. Attempting to impose baseless and arbitrary state or federal RVP restrictions would not increase safety—rather, it would create financial and regulatory obstacles to the movement of goods, which inevitably would be passed on to consumers.

The Pipeline and Hazardous Material Safety Administration (PHMSA) recently came to the same conclusion when it determined that Federal Hazardous Material Transportation Law preempts state RVP requirements for the transportation of crude oil by rail. PHMSA determined that state RVP requirements do not conform to U.S. Hazardous Materials Regulations and are an obstacle to accomplishing and carrying out Federal Hazardous Materials Transportation Law. At the same time, PHMSA also withdrew its January 2017 Advanced Notice of Proposed Rulemaking regarding RVP for unrefined petroleum products and other flammable liquids. With this decision, backed by rigorous science that shows imposing RVP limits would not reduce the risks of transporting crude oil and other flammable liquids by rail, PHMSA is no longer considering vapor pressure limits for the transport of crude oil by rail.

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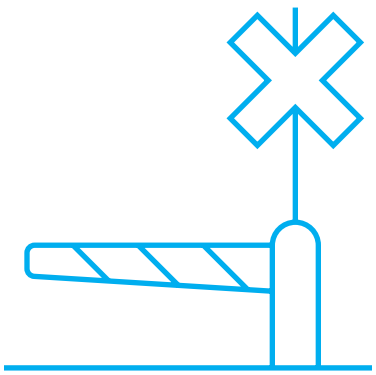


AFPM supports DOT efforts to improve rail safety by fostering advancements in technology, adding more track inspection equipment and wayside detectors, conducting more frequent track inspections, and supporting a regulatory and financial environment that encourages continued private investment in the nation's freight railroad system.

Encouraging Collaboration on Derailment Prevention

Rail safety is a collaborative effort that requires action from all stakeholders —including the U.S. rail industry and regulators—to make the system safer. Fully eliminating rail accidents will require looking beyond mitigating the results of a rail incident and instead focusing on preventing derailments and keeping rail cars on the tracks. AFPM supports efforts of the rail system community to eliminate the root causes of accidents, including track and equipment failures and human factors.

Track and equipment failures

Track and equipment failures are the primary causes of train derailments, consistently accounting for between 43% and 52% of freight train accidents each year over the past decade, according to Federal Railroad Administration data. Efforts to increase track inspections and maintenance should therefore be a priority.

A multi-year National Academy of Sciences study on energy transportation echoed this call in 2017, highlighting the importance of preventing derailments through frequent track inspection.

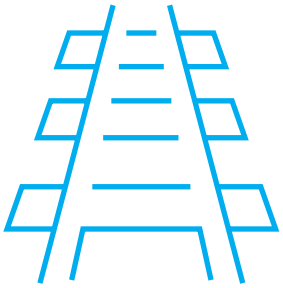
While railroads have adopted new technologies to monitor the health of the tracks and flag potential safety issues for maintenance, the report notes more work can be done to identify track defects through onboard tools that check the alignment of the track, and wayside detectors that monitor passing trains for potential issues.

AFPM would support DOT efforts to improve track integrity through fostering advancements in technology, adding more track inspection equipment, conducting more frequent track inspections, or supporting a regulatory and financial environment that encourages continued private investment in the nation's freight railroad system.

Addressing human factors

For the last decade, FRA data shows between 35% and 41% of freight train accidents each year were caused by "human factors," making the human element another critical factor in accident prevention.

In some cases, augmenting fallible human perception with technology can help reduce errors and speed reaction times. In other areas, investing in additional training and screening—to ensure inspectors are more qualified, for example—have the potential to significantly improve accident rates.



American fuel and petrochemical manufacturers are committed to continuous improvement in rail safety and to working with others in the rail-system community to ensure that our railways can safely, reliably and efficiently move the products that make modern life possible.