

# Balancing Interests and Protecting the U.S. Rail Infrastructure

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Protecting the United States' railroads is an ever increasing responsibility, especially as new threats to America's infrastructure emerge since the September 11th terrorist attacks. In addition to terrorism, concerns arise regarding the aging infrastructure and complicated relationship between the federal government and private sector interests.

The recent derailment of a CSX train carrying toxic chemicals in Maryville, Tenn. illustrates the danger of a potential attack. On July 2, 2015 a rail tanker car carrying 24,000 gallons of the toxic material Acrylonitrile, a flammable liquid used in plastic manufacturing, burned for more than 10 hours and forced the evacuation of more than 5,000 people from their homes. While there were no fatalities in the incident, 87 people were treated for inhalation of toxic fumes at local hospitals. [1] Had this incident taken place in a more densely populated area, and been more severe due to deliberate detonation or sabotage, there could have been great loss of life and a huge economic impact from its aftermath.

Infrastructure is considered "critical" when the services it provides are deemed vital to national security. The list of critical infrastructure is growing rapidly and includes transportation, defense industrial base, information, telecommunications, banking and financial services, agriculture, food, water, public health, government services, emergency services and postal delivery services. [2]

While the government bears the primary responsibility for protecting critical infrastructure targets, the vast majority of these structures (an estimated 85 percent) are privately owned. [2] The private firms owning these infrastructure components thus have a superior understanding of how each item within their infrastructure network operates and



**The Dallas rail system has more miles of light rail than anywhere else in the country. Protecting this infrastructure is important to the future of rail systems. (Image courtesy of the U.S. Department of Transportation)**

the vulnerabilities they face, but they do not have the commercial incentive to fund all measures needed to reduce the odds of an attack upon these areas. The national Strategy for Homeland Security, originally released on July 16, 2002, states, "The government should only address those activities that the market does not adequately provide for example, national defense or border security. For other aspects of Homeland Security, sufficient incentives exist in the private market to supply protection. In these cases we should rely on the private sector." Over the last 13 years, as more private sector structures have been added to the list of items considered critical and at risk with little or no response from the private sector. [2]

One example of the conflict emerging between the government and private enterprise regarding financial efficiency and the need for protection from terrorist acts is the case of the CSX Railroad vs. the District of Columbia in 2005. In January of that year, two Norfolk Southern trains collided near Graniteville,

South Carolina due to a malfunctioning automated rail switch that sent a train moving at 47 miles per hour onto a sidetrack where it collided with a parked locomotive. The derailment punctured a tanker car filled with chlorine gas which resulted in the death of the train engineer and eight nearby civilians due to chlorine gas inhalation. In addition to these nine deaths, 554 people were hospitalized with respiratory difficulties; approximately 5,400 residents within a two mile radius of the incident were evacuated and a total economic impact of \$6.9 million was inflicted upon the community. [3] In response to this situation the Washington, D.C. city council passed a resolution banning the transportation of hazardous chemicals within a 2.2 mile radius of the U.S. Capitol building without a special permit. The act cited a "failure of the federal government to prevent a terrorist threat" which could inflict similar damage upon Washington D.C. In response, CSX railroad, which is responsible for the vast majority of commercial rail traffic in the Washington area, appealed to the U.S. Surface

transportation Board (USSTP) to overturn the legislation, claiming that it would add “hundreds of miles and days of transit time to hazmat shipments” and have a negative impact on rail shipments around the country by affecting switching schedules and backing up shipments due to the increased time to transport materials through the Washington area. The USSTP ultimately ruled in CSX’s favor. [2]

This case illustrates the tendency of the private sector to emphasize efficiency and profitability over the need for increased security, leaving open the question of who will take the lead in protecting America’s cities against a potentially devastating attack on targets such as chemical plants; the rail lines on which chemical products are moved; and other vulnerable infrastructure targets. Richard Falkenrath, former deputy homeland security advisor to President George W. Bush, stated shortly after the CSX victory that this situation was particularly disturbing because, “of all the remaining civilian vulnerabilities in America today, one stands alone as unique, deadly, pervasive and susceptible to terrorist attack: toxic-inhalation hazard (TIH) of industrial chemical, such as chlorine, ammonia, phosgene, meth-bromide, hydrochloric and various other acids.” [4] The resistance by CSX (which was supported by other rail operators and lobby groups in its efforts

to circumvent the Washington, D.C. restrictions) to alter its operational procedures on even a small scale to protect the nation’s capital from such a major threat is a clear indication that the 2002 homeland security operating strategy to rely upon the private sector to supply protection from threats within its area of operation is questionable and in a worst case scenario could lead to disaster.

Fourteen years after the 9/11 attacks, a clear strategy for the protection of America’s vulnerable rail infrastructure has yet to fully emerge. If industry is not motivated to invest in protection of its own systems against attack and the federal government does not take the initiative, who will? The answer to this question cannot be drawn from just one side of the conflict between the need for security and the need for economic efficiency, rather it must come from a deeper collaboration between the government and private interests. Private industry, whose business interacts with critical infrastructure components vulnerable to attack, must understand the new relationship between seemingly routine business decisions and national security concerns. Government entities should understand the impact of regulatory policy on the ability of the private sector to function efficiently and take this consideration into account when drafting policy. Ultimately, a sustainable policy must account for

both the potential tradeoffs that exist between efficiency and vulnerability in order to create security measures which provide protection without severely diminishing the ability of private industry to function smoothly.

#### References:

- [1] Megargee, S., & Clark, J. (2015, July 3). [Maryville officials lift train derailment evacuation](#). *The Tennessean*.
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