

TESTIMONY OF
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SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY
BEFORE THE
SUBCOMMITTEE ON RAILROADS, PIPELINES AND HAZARDOUS MATERIALS
OF THE
HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
ON “FEDERAL REGULATORY OVERREACH IN THE RAILROAD INDUSTRY:
IMPLEMENTING THE RAIL SAFETY IMPROVEMENT ACT”

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SUBMITTED BY

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The American Public Transportation Association (APTA) is a nonprofit international association of 1,500 public and private member organizations, including transit systems and high-speed, intercity and commuter rail operators; planning, design, construction, and finance firms; product and service providers; academic institutions; transit associations and state departments of transportation. APTA members serve the public interest by providing safe, efficient and economical public transportation services and products. More than 90 percent of the people using public transportation in the United States and Canada are served by APTA member systems.

INTRODUCTION

Chairman Shuster, Ranking Member Brown and members of the Railroads, Pipelines and Hazardous Material Subcommittee, on behalf of the American Public Transportation Association (APTA) and its more than 1,500 member organizations and the South Florida Regional Transportation Authority, where I serve as the Executive Director and oversee the Tri-Rail commuter railroad, I thank you for the opportunity to testify today to discuss the Rail Safety Improvement Act and to offer insight on matters related to the implementation of Positive Train Control (PTC).

Passenger safety is the number one priority on our nation's commuter railroads. As a commuter rail operator, I welcome the installation of PTC on my railroad and speak for the industry when I say that we are 100 per cent committed to implementing positive train control technologies. Working with the American Public Transportation Association, representatives of commuter rail properties across the country have aggressively pursued the funding and technology necessary to meet this safety mandate. There are, however, major obstacles to implementing PTC, related to both funding and technology. These challenges pose significant potential for delays in completing the interim steps required for PTC implementation by the 2015 deadline. In order to assist publicly funded commuter railroads in meeting the federal mandate, Congress must enact more flexible timelines, significantly increase the federal investment, and direct the FCC to set aside at no cost adequate radio frequency spectrum. In making these recommendations we do not intend to inhibit efforts to implement PTC on some commuter railroads prior to the deadline, and we in fact urge Congress to prioritize funding for those efforts.

ABOUT APTA

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COMMUTER RAILROADS

Commuter rail is one of the most commonly used methods of public transportation for those traveling from outlying suburban areas into commercial centers of metropolitan areas, often to and from places of employment, education, commerce and medical care. The National Transit Database (NTD) lists 27 publicly funded commuter railroads covering more than 4,000 total track miles in the United States. The most recently published APTA public transportation ridership report, which provides data on transit passenger ridership for U.S. transit agencies, indicates there is continued strong demand for public transportation despite the economic downturn, with nearly 10.2 billion trips taken on public transportation nationally in 2010. The demand for commuter rail service has also remained strong, with 13 out of 26 commuter rail systems in operation for all of 2010 reporting ridership increases. As the current situation of political unrest in many oil producing nations continues, more and more commuters are turning to public transportation to escape rising gas prices and many transit operators are reporting double digit ridership increases in February 2011.

TECHNOLOGY OVERVIEW

Positive Train Control is a sophisticated predictive enforcement technology that is capable of preventing accidents caused by human error, such as collisions between trains and derailments that result from trains traveling too fast for conditions or improperly aligned switches. A PTC system is also designed to

intervene against unsafe operations, acting as a backup if a train crew operates a train improperly or fails to comply with signals. PTC is dependent upon precise train position in near real time which may be achieved by a number of methods, including global positioning satellites (GPS). This technology is also heavily dependent upon the transmission of enormous amounts of digital data communications as a means of delivering movement authority information to trains and achieving interoperability between carriers. As explained by the Federal Railroad Administration (FRA), PTC “systems issue movement authorities to train and maintenance-of-way crews, track the location of the trains and maintenance-of-way vehicles, have the ability to automatically enforce movement authorities, and continually update operating data systems with information on the location of trains, locomotives, cars, and crews.”

A communications intensive technology, PTC requires continuous availability of radio frequency spectrum throughout the operating environment to support the data being transferred between different components located on board the train, along the track and at centrally located servers. Supporting this immense transfer of data communications throughout the entire network of a commuter railroad will require a large amount of radio spectrum, especially on lines such as the Northeast Illinois Regional Commuter Railroad Corporation, or METRA, which spans more than 1,200 miles of track mileage through six counties. Furthermore, in addition to basic operational requirements, as mandated in the Rail Safety Improvement Act (RSIA)-, spectrum is also necessary to achieve interoperable communications between commuter and freight railroads which often operate on the same tracks. This poses a significant challenge as railroads must be able to communicate and operate seamlessly across one another’s boundaries. Significant development work required to define the parameters of interoperability is nearing completion, including the data radio which is a critical design element of the required equipment. Much work remains to be done, however, in terms of the software and messaging platforms over which the radios are expected to operate in order to effectively implement PTC safety systems. Regrettably, many commuter rail agencies have encountered significant difficulty acquiring the spectrum over which these radios must operate. The inability to acquire spectrum may lead to further delays in technological development.

RAIL SAFETY IMPROVEMENT ACT AND 49 CFR PART 236

The Rail Safety Improvement Act (P.L. 110-432) was signed into law on October 16, 2008. This legislation was the culmination of longstanding safety efforts, providing for the reauthorization of the Federal Railroad Administration and the National Passenger Railroad Corporation (Amtrak), the revision of Hours of Service requirements for rail and signal employees, as well other major safety initiatives. Most importantly for the purpose of today’s hearing, the RSIA mandated by December 31, 2015, the deployment of Positive Train Control technology on all railroad track which carries passengers, accommodates hazardous materials or experiences heavy levels of service. To assist operators with the implementation of PTC, the bill authorized \$250 million over 5 years for Railroad Safety Technology Grants. The original intent of the authorization was to provide \$50 million per year in grant funding, with priority given to projects that advance technology and benefit both freight and passenger rail operations. The bill also requires the Secretary of Transportation submit an interim progress report to Congress in 2012 on the status of PTC implementation.

In 2010, the FRA issued its final rule on PTC, putting forth statutory reporting requirements which outlined the process by which railroads are expected to comply with the mandate and established a timeline for plan review and certification. Pursuant to the rule, commuter railroads were required to submit PTC Implementation Plans (PTCIP) by April 16, 2010. Plans were required to include information detailing how an agency intends to meet the functional requirements of PTC, including data regarding matters related to rolling stock, risk analysis and interoperability between host and tenant railroads. I

am pleased to report that all APTA commuter rail agency members submitted their plans on time and that those plans are in various stages of approval.

FUNDING CHALLENGES

In an attempt to quantify the costs associated with implementing Positive Train Control, APTA surveyed its public commuter rail members in 2009 to ask for initial cost estimates. The results were staggering. Not including costs associated with acquiring spectrum or the subsequent software and operating expenses, the preliminary assessment was more than \$2 billion. According to the Association of American Railroads (AAR), the cost to freight railroads would be significantly greater, with early estimates upwards of \$10 billion. These estimates are now considered to be conservative and industry experts believe costs may in fact be far greater.

When the Rail Safety Improvement Act was enacted in 2008, the commuter rail industry was aware that achieving the PTC goal within the mandated timeframes posed significant financial challenges. Nonetheless, the commuter railroads worked together in good faith to comply with the Act's requirements. The industry operated under the premise that a new surface transportation authorization bill would be in place to dramatically increase -- if not double -- the federal capital support for the type of maintenance and state of good repair investments necessary for operating public commuter rail systems, freeing up other capital for PTC implementation projects. Additional federal funding was fundamental to the industry's ability to achieve the 2015 deadline. As we move into the latest authorization extension period, it has become clear that a new bill providing increased funding will not materialize in time to affect PTC implementation. Agencies are faced with flat federal funding levels that are expected to not only support current operations, but to also fund this capital-intensive federal mandate. Commuter railroads that have begun the process of funding PTC are facing very difficult choices -- some agencies are already planning to defer critical safety sensitive infrastructure maintenance on bridges and electrical substations to pay for PTC, while others have concluded they will have to reduce existing passenger service to pay for costs associated with meeting the federally imposed mandate. Delaying critical safety projects and cutting service are not acceptable methods of funding PTC. A multi-year approach to funding PTC projects is critically important to sound investment and the commuter rail industry strongly supports the passage of a well funded six-year multimodal surface transportation bill.

In addition to concerns about levels of long-term federal support, the downturn in the national economy over the course of the last several years has drastically reduced state and local capital revenue streams, the only other source of funding for large capital projects. As such, many commuter railroad operators have been forced not only to slash capital spending, but in many instances, have been under tremendous pressure to tap capital funding to pay for operating costs. As you know, that pressure led Congress to allow up to 10 percent of 2009's American Recovery and Reinvestment Act (ARRA) dollars to be used for such operating purposes. As expected, this allowance, was helpful but a 2010 survey of APTA transit system members found that over 80 percent of public transit providers were forced to reduce service, increase passenger fares, lay off staff, or some combination of the three.

The Rail Safety Technology Grant program in the RSIA authorized \$250 million over 5 years to assist in the deployment of PTC related technologies on commuter and freight railroads. Under this program, applicants can request funding for technology related projects, with preference given to those projects that are the collaborative effort of multiple railroads. Unfortunately, the \$50 million for this program was not provided in the Administration's budget requests for Fiscal Year (FY) 2009, 2010, or

2011 and is absent in the 2012 budget as well. Furthermore, even if fully appropriated, this authorization was never enough to make a significant dent in the more than \$2 billion estimated cost faced by commuter rail agencies. To help implement PTC, we strongly urge Congress to immediately substantially increase the authorization level for publicly funded commuter railroads to a level that adequately reflects industry needs and ensure that those funds are appropriated quickly.

To ensure positive train control systems go online by 2015, agencies must begin their procurement processes now, committing extremely limited capital funding for PTC uses. The nation's publicly funded commuter railroads are committed to implementing PTC on their railroads and ask the federal government to demonstrate the same level of commitment by increasing the authorization to cover 80 percent of the cost to implement PTC on publicly funded commuter railroads, as is consistent with other federal Department of Transportation programs. Providing an 80/20 cost share to publicly funded commuter railroads allows operators to install PTC on their systems while also continuing critically needed state-of-good-repair projects – a level of flexibility that is vital to operators. Redirecting an agency's entire capital budget to install PTC is not an effective use of funding if deferred critical safety maintenance projects result in inoperable electrical substations or bridges or other safety critical systems.

It should be noted that the option of using low interest loans from the Railroad Rehabilitation and Improvement Financing (RRIF) program has been mentioned as a potential source of funding for PTC implementation. For publicly funded commuter railroads to assume additional debt in a time of deep economic crisis in order to finance a severely underfunded federal safety mandate is not the answer. For example, at the New York Metropolitan Transportation Authority (NYMTA), early estimates to install PTC on its two commuter railroads, Long Island Railroad (LIRR) and Metro North Railroad (MNRR), are in the hundreds of millions of dollars. Unfortunately, with an annual debt service of \$1 billion dollars, NYMTA is at its practical indebted limit and adding hundreds of millions of dollars in new debt may impact creditworthiness. Similarly, the North County Transit District (NCTD) in San Diego estimates its PTC costs to be in the \$60-90 million range, despite an annual capital budget of only \$10-\$15 million. Significant federal investment must be part of the equation to fund the astounding cost of PTC implementation on our nation's publicly funded commuter railroads.

TECHNOLOGY CHALLENGES

The technological obstacles associated with implementing PTC by 2015 are proving to be equally as challenging. Positive Train Control technologies are largely untested in the commuter rail environment, with no successful testing achievements to date. In comparison to freight and intercity rail operations, the commuter rail environment poses unique challenges given the high traffic volumes, close headways and reliability demands that have a low tolerance for service delays. For example, MTA Metro North commuter railroad operates approximately 700 revenue trains daily. During the peak morning rush hour, as many as 200 trains are required to meet the demand. Ensuring successful and cost efficient operations to passengers depends on providing daily, on-time, reliable service, therefore, PTC systems must be carefully integrated to allow for these high volumes of service and must be calibrated to meet the needs of the precise operating environment of a commuter railroad.

The complexities associated with track and infrastructure configurations which support high volumes of traffic, precision stop enforcements and multiple-unit vehicles pose especially unique challenges in implementing PTC in the commuter rail environment. In order to support the high volume of trains

operated in a short period of time, PTC on commuter railroads must be designed and installed in a way that provides greater flexibility of train movements. Junctions and interlocking, the points at which trains move from one track to another, must be designed and located at more frequent intervals to allow for maximum throughput and to enforce the safe stoppage of a train. Adding to the complexity, certain commuter railroads must interoperate with Amtrak's Advanced Civil Speed Enforcement System (ACES) which operates on the Northeast Corridor, and Vital Electronic Train Management System (VETMS), which is operated by certain freight railroads. Consequently, these unique needs introduce a higher level of complexity than is found on intercity and freight operations. To date, a high capacity and efficient PTC system has yet to be proven reliable on a commuter railroad. Until proper testing in the commuter rail environment is conducted, there can be no definitive resolution as to whether or not PTC will increase travel time or result in service disruptions. Extensive development, testing and validation are necessary to ensure operational success in this unique environment.

Further complicating matters is the realization that few vendors have the expertise necessary to install PTC technologies on freight and passenger railroads. There are currently no "turn-key" vendors who can install all components of a PTC system. Instead, to implement PTC it will be necessary to contract with multiple vendors who provide differing services. Competition to secure these vendors will likely result in services being sold to the highest bidder, pushing privately held companies to the top of the list and publicly funded commuter railroads to the bottom.

Vendor concerns aside, the fact remains that most of the technology associated with PTC simply does not exist at present. There is no off-the-shelf technology available to freight or commuter railroads, as nearly all components are still in the research and development phase. For example, it is our understanding based on information provided at a meeting of the Interoperable Train Communication Committee (ITC), that the radios to be used for interoperable communications, a critical piece of the PTC puzzle, will not be available until the first quarter of 2012. These radios are necessary in order to complete work on the software and messaging platform over which the radios are expected to operate. Furthermore, these radios must be complete in order for commuter railroads to begin the procurement process and any delays in development will result in delays in procurement.

The recent December 2010 report by the U.S. Government Accountability Office (GAO) entitled *"Rail Safety: Federal Railroad Administration Should Report on Risks to the Successful Implementation of Mandated Safety Technology"* also found that while all railroads impacted by PTC requirements have been putting forth good faith efforts to meet the mandate, there is strong potential for delays if certain problematic components of the process are not rectified in a timely manner. The most striking information to come out of the report is the GAO's likening of the PTC technology rollout to that of the development of a military weapons system, noting that "demonstrating a high level of maturity before allowing new technologies into product development programs increases the chance for successful implementation, and that, conversely, technologies that were included in a product development program before they were mature later contributed to cost increases and schedule delays." We therefore urge Congress to extend the PTC implementation deadline for commuter railroads to December 31, 2018.

Notwithstanding, we do not believe that this extension should preclude commuter railroads who have committed to implement PTC prior to the 2015 deadline, such as the Southern California Regional Rail Authority (SCRRA), from moving forward with their advanced implementation schedule. We fully understand, appreciate and support SCRRA's concerted effort to implement PTC on its rail network by 2012.

APTA strongly supports the early implementation of PTC in Southern California and endorses the SCRRA service area to be the first interoperable PTC system in service, allowing it to serve as the basis to inform all commuter railroads on PTC. Further, we believe that federal resources should be provided, including expeditious action by the Federal Communications Commission (FCC) on the pending 220 spectrum acquisition application by SCRRA, and on the allocation of a no cost radio spectrum set aside for PTC on commuter railroads nationwide. We urge the Federal Railroad Administration to devote the necessary resources to fully support SCRRA's early implementation of PTC on its commuter rail system by 2012.

All commuter railroads can learn from early implementation efforts and prevent costly mistakes from being repeated across the nation. These early implementation efforts will likely result in a more cost-efficient and technologically sound blueprint for implementing PTC on other commuter railroads.

Extending the date would also give Congress the opportunity to review both the FRA's 2012 mid-term Report to Congress on the Status of PTC Implementation as well as the Federal Transit Administration's report on PTC, which is expected to be completed in 2013.

SPECTRUM

The implementation of Positive Train Control will require an extensive communications infrastructure to support the transmission of train control based data communications. Unfortunately, the RSIA contained no provision for allocating spectrum for PTC purposes, therefore commuter railroads are actively seeking to acquire radio spectrum on the open market to support wireless and interoperable radio communications. While some agencies have been successful in acquiring spectrum, most have run into significant difficulties, as spectrum is a finite and highly competitive commodity that some qualified license holders are offering for sale at exorbitant rates. Two agencies currently have applications pending before the FCC to settle acquisition disputes involving qualified spectrum license holders and third party claimants. To date, the FCC has not acted on these applications and has taken no action to ensure that spectrum is available to support implementation of PTC in time to satisfy the 2015 deadline.

Sensing the urgency of the matter, the Federal Railroad Administration weighed in on the matter with a July 2010 letter from Administrator Joseph C. Szabo to the FCC requesting a set aside of spectrum for publicly funded commuter railroads. In his request, Administrator Szabo astutely identified that since publicly funded commuter railroads "are specifically operated to provide a public service, as opposed to private gain, they rely heavily on public funding to meet operating and capital requirements...the financial ability of such railroads to obtain the necessary spectrum to meet the statutory deadline is questionable at best."

A nationwide PTC spectrum needs analysis is being conducted in conjunction with the Transportation Research Board (TRB), but it is our understanding that report will not be available for at least another six months. To ensure that PTC is operational by the federally mandated timeline, spectrum acquisition must take place immediately. Therefore, pending completion of the nationwide spectrum needs analysis, we urge the FCC to act now to reserve and reallocate spectrum in the following urban areas with major commuter rail systems, which, because of the current density of all railroad traffic, already experience significant communications congestion: New York, Chicago, Boston, Philadelphia, Los Angeles, San Francisco, Baltimore, Miami, Washington, D.C., Seattle, San Diego, Dallas/Fort Worth, and Salt Lake City. It is anticipated that the PTC spectrum needs analysis may identify other systems that will also experience difficulty in acquiring spectrum for PTC, and this interim request for a PTC spectrum set aside may need to be supplemented to cover additional systems after the needs analysis is completed.

Granting this set aside will remove a costly and burdensome roadblock for publicly funded railroads on their path to meeting the PTC deadline.

HOURS OF SERVICE

In addition to addressing technology-based safety issues, the RSIA also revised the Hours of Service (HOS) requirements, limiting on-duty and limbo time for freight rail and signal employees. Through participation in the FRA's Rail Safety Advisory Committee (RSAC) Passenger Hours of Service Working Group, APTA has partnered with the FRA and key industry stakeholders to develop consensus based recommendations on how to move forward with a final Passenger Hours of Service reform. The Notice of Proposed Rulemaking for Passenger HOS is expected to be published sometime in the spring of 2011, with a final rule expected to be handed down several months later.

APTA appreciates the opportunity it was given to work with the FRA and industry partners during the collaborative process to develop these rules and looks forward to analyzing the impacts of the final rule on the commuter rail industry. While it is not our intent to prejudice a rule that has yet to be released, it should be noted, that the industry has concerns regarding the costs associated with implementing HOS reforms. Although there is no way to determine the magnitude of the final rule, it is anticipated to likely result in the need for commuter railroads to acquire and use a biomathematical model of human performance and fatigue, and necessitate supplementary employee training programs. This poses a significant financial implication at a time when commuter rail agencies across the country are struggling to maintain current service and staffing levels. We strongly encourage Congress to fund, and the FRA to make available to publicly funded railroads, a scientifically valid model for this purpose, as well as federal training assistance for agencies to properly train employees to ensure compliance with the new mandate.

CONCLUSION

To carry out its congressionally chartered mission of providing safety oversight to the nation's railroads, the Federal Railroad Administration was vested with enforcement authority to ensure compliance. These powers include imposing civil penalties and/or equitable remedies, including injunctive relief. Though not expressly stated in the statute or final rule, the implication remains that an existing commuter railroad's failure to comply with full PTC implementation within the federally imposed timeline may result in the FRA ordering the discontinuation or reduction of operations until requirements of the mandate have been fulfilled. This worst case scenario would have far reaching impacts, paralyzing transportation networks and preventing passengers from reaching destinations such as work, school, medical appointments and retail centers. We urge Congress to extend the implementation deadline to December 31, 2018, provide adequate federal funding equal to 80 percent of the estimated \$2 billion implementation costs on commuter railroads, and to direct the FCC to set aside at no cost enough radio frequency spectrum to ensure commuter railroads are successful in meeting this federal mandate.