

Positive Train Control H.R. 3819, Pub. L. 114-73 Implementation Extension

EUCI Webinar

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Rail Safety Improvement Act

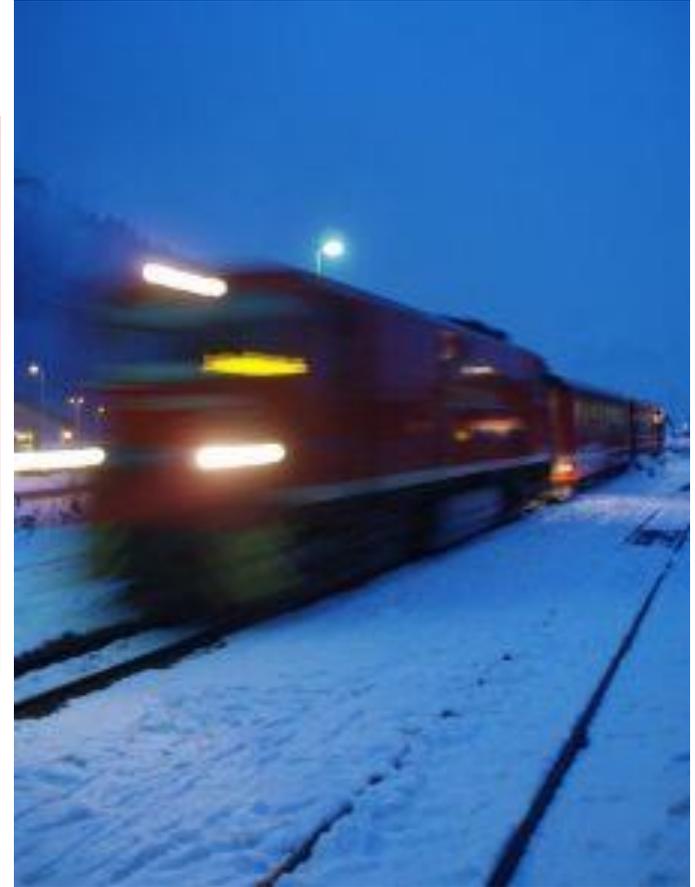
Rail Safety Improvement Act of 2008, Sec. 104 (codified at 49 U.S.C. § 20157) (**RSIA**)

- Positive Train Control (**PTC**) is technology designed to prevent collisions and other incidents by automatically detecting and controlling the movement of trains
- Definition (49 U.S.C. § 20157(i)(3)): a system designed to prevent train-to-train collisions, over-speed derailments, incursions into established work zone limits, and the movement of a train through a switch left in the wrong position
- Implementing regulations at 49 C.F.R. Parts 229, 234, 235 and 236

H.R. 3819, Pub. L. 114-73

Positive Train Control Enforcement and Implementation Act of 2015 (amends 49 U.S.C. § 20157)

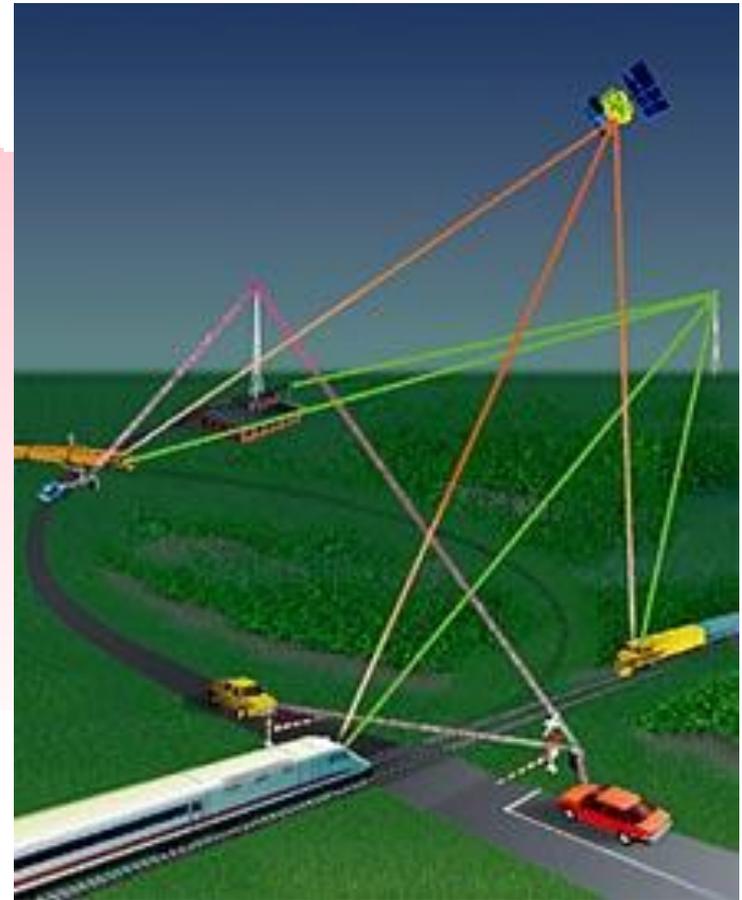
- Extends general deadline for PTC implementation to Dec. 31, 2018
- Passed by House on Oct. 27, Senate on Oct. 28
- Signed by President Obama on Oct. 29
- Added on to short-term transportation funding extension



PTC – How it works

Key components:

- Equipment on locomotive cars detects position and relation to other objects
- Equipment at control center – broadcasts authority for train movements
- Wayside interface units
- Wireless data line between train and control center



RSIA Requirements

Each PTC system **must reliably and functionally prevent:** (49 C.F.R. § 236.1005)

- Train-to-train collisions
- Overspeed derailments
- Incursions into established work zones
- Movement of a train through a main line switch in the improper position

RSIA Requirements

When (49 U.S.C § 20157(a)(1); C.F.R. § 236.1005(b)(1)):

- *Progressively*, according to PTCIP submitted by April 16, 2010
- Complete implementation by December 31, 2015 – now extended to December 31, 2018

Who (49 U.S.C § 20157(a)(1)):

- Class I freight carriers
- Each railroad providing or hosting regularly scheduled
 - Intercity passenger service (Amtrak)
 - Commuter passenger service

RSIA Requirements

Where:

- On each main line over which any quantity of poisonous by inhalation (PIH) material is transported (49 U.S.C. § 20157(a)(1)(B); 49 C.F.R. § 236.1005(b)(i))
- On each main line used for regularly provided intercity or commuter passenger service, subject to limited exceptions

Main line definition:

- Freight: a segment or route of railroad tracks over which 5 million or more gross tons of railroad traffic is transported annually (RSIA Sec. 104(i)(2), codified at 49 U.S.C. § 20157(i)(2))
- Passenger: all intercity (Amtrak) and commuter passenger lines

RSIA Requirements

- **Interoperability** (49 U.S.C. § 20157(i)(1))
- **Priority:** Address areas of greater risk prior to areas of lesser risk (49 U.S.C. § 20157(a)(2))
- Once a railroad's plan is approved, it must be phased in progressively (49 C.F.R. § 236.1005(b)(1)) – not all at once
- Subparts A through G of 49 C.F.R. Part 236 continue to apply

RSIA Requirements

Submittals:

- PTC Implementation Plan (**PTCIP**) (49 C.F.R. § 236.1011)
- PTC Development Plan (**PTCDP**) and Type Approval (49 C.F.R. § 236.1013) - Components
- PTC Safety Plan (**PTCSP**) (49 C.F.R. § 236.1015) – Procedures
 - PTCDP and PTCSP need not be submitted simultaneously with PTCIP
- FRA may require independent third-party verification and validation of product safety plan (49 C.F.R. § 236.1017; 49 C.F.R. § 236.913)

PTC applications – public docket (49 C.F.R. § 236.1011(e))

- <https://www.fra.dot.gov/Page/P0628>



Extension

Why is the extension necessary?

- Market created overnight with passage of RSIA
- Significant technical challenges
- Individual Class I freight railroads and Amtrak – proprietary systems
- Few manufacturers or qualified contractors
- No common platform
 - Software
 - Communications
- Availability of radio spectrum
- Varying degrees of coordination required to achieve interoperability

Extension

Recent months:

- GAO report – GAO-15-379, September 2015
- Warnings from freight railroads
 - Notice to TIH customers of suspension of service prior to Jan. 1
- Warnings from commuter railroads
 - No passenger service as of Jan. 1
- FRA – prepared to enforce

Extension

General provisions

- PTC implementation deadline extended to Dec. 31, 2018
- Railroads must submit revised PTC Implementation Plans no later than Jan. 27, 2016 (90 days after enactment of extension)

Extension

Revised plan must describe -

- How the PTC system will provide for interoperability between different carriers' equipment
- How the railroad will implement PTC in a manner that addresses areas of greater risk before areas of lesser risk



Extension

Revised plan must provide-

- Year-by-year schedule for spectrum acquisition and activation
- Total amount of PTC system hardware that will be installed, on a year-by-year basis, broken out by each major hardware category
- Total number of employees required to receive training under the applicable PTC system regulations, with year-by-year breakdown\



Extension

Revised plan must provide-

- Summary of any remaining “technical, programmatic, operational, or other challenge” including
 - Availability of public funding
 - Interoperability
 - Spectrum
 - Software
 - Permitting
 - Testing, demonstration and certification

Extension

Alternative schedule for implementation

- Subject to FRA review and approval
- Railroad may propose alternative schedule and sequence for implementation of PTC by Dec. 31, 2020
- Must demonstrate progress by Dec. 31, 2018:
 - All PTC system hardware installed
 - All spectrum acquired
 - All employee training completed
- Must **certify** to FRA that it will be in full compliance with the requirements by the date proposed in the alternative schedule

Extension

Alternative schedule for implementation –

- Class I railroads and Amtrak must have initiated a revenue service demonstration on the majority of territories it owns or controls that are subject to PTC
- All other carriers must have initiated a revenue service demonstration over one territory that is subject to PTC
- FRA may establish other criteria for review of alternative schedule
- FRA may extend the implementation deadline for a system pursuing an alternative schedule, but not beyond Dec. 31, 2020

Extension

Annual reporting:

- Beginning March 31, 2016, and annually thereafter until PTC system is fully implemented, all railroads must submit annual reports on progress of implementation efforts:
 - Spectrum acquisition, hardware installation, employee training
 - Performance in accordance with implementation schedule (default or alternative)
 - For Amtrak and commuter rail operators, description of resources identified and allocated to implement PTC system
 - Total number of route miles on which PTC has been initiated for revenue service demonstration or implemented
 - Other information as directed by FRA

Extension

Enforcement – FRA may assess penalties pursuant to 49 U.S.C. Chapter 213 for:

- Any violation of Section 20157
- Failure to submit or comply with the revised PTC Implementation Plan – default or alternative schedule
 - Requires strict adherence to spectrum acquisition schedule, installation quantities and schedule, employee training schedule and numbers

Extension

Provisional operations:

- FRA has discretion to authorize a carrier to commence operation of a PTC system or component as part of a phased implementation plan



Extension

Shakedown period:

- From date of enactment through the date one year following the date on which the last Class I railroad fully implements PTC on all of its required lines
- Relaxes operational restrictions that would otherwise apply in case of:
 - PTC system failure
 - Failure of interconnecting railroad to supply a PTC-controlled consist
 - PTC system fails to initialize, cuts out or otherwise malfunctions
- As long as the carrier adopts operating rules to provide an equivalent or greater level of safety than the level achieved immediately prior to use or implementation of PTC

Extension

FRA's obligations

- For alternative plans:
 - Must advise within 45 days of any deficiencies that would prevent approval of the alternative plan and require correction in not more than 90 days following submission by carrier
 - Must review and approve or disapprove within 90 days of submission by carrier
 - Must post annual reports on website within 60 days of receipt
 - Proprietary and security-sensitive information protected at FRA's discretion
 - Must report on implementation progress to Congress not later than July 1, 2018

Extension

Class II and Class III Railroads

- By Feb. 26, 2016 (120 days from enactment), DOT required to amend federal regulations governing requirements to equip locomotives operating in PTC territory to extend each deadline under the regulations by three years

Ongoing challenges

Very little public funding available for PTC:

- TIGER grants
- RRIF loans
- Railroad Safety Technology Grant Program - \$50 million (2010, 2013)

Acquisition of radio spectrum

- Regulated by FCC

Continuing technical limitations



Questions?

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